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PRESIDENT'S ADDRESS.[1]

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I DESIRE at the outset of my presidential address to express to you my high appreciation of the honor conferred upon me and my thanks for the same. I esteem it a special honor to have been elected president of the American Medical Association at the semicentennial meeting in Philadelphia.

Our association, as the representative body of American physicians, will no doubt continue to increase in membership and in influence. The day is perhaps not far distant when no reputable physician will be willing to confess that he does not belong to the American Medical Association, and when no progressive physician can afford to do without our journal. I would not exclude a reputable physician from membership because the State, county, or district medical society to which he belongs declines to adopt our code of ethics. If he, individually, is willing to be governed by the regulations made by this representative body, I see no good reason for rejecting his application for membership.

A liberal and progressive spirit will do much toward promoting the growth and influence of the Association. The medical profession in this country has suffered more from the ignorance of some of its members who hold diplomas from regular schools of medicine than from the attacks of those whom we call irregulars, or quacks. To maintain our standing in the estimation of the educated classes we must not rely upon our diplomas or upon our membership in medical societies, but must show ourselves superior in knowledge and in professional resources to the ignorant pretender or to the graduate of a medical school which is bound in its teachings by an untenable creed, adopted before the light of science had taught physicians to reject theories and the dicta of authorities in favor of truths demonstrated by modern methods of research. There are those who still speak of us as "old-school physicians," ignorant, apparently, of the fact that scientific medicine is, to a great extent, of very recent origin, and that all of the great discoveries in relation to the etiology, prevention, and specific treatment of infectious diseases, and nearly all the improved methods and instrumental appliances for clinical diagnosis and surgical treatment, have their origin within the ranks of the regular profession. While, therefore, we still have with us some "old-school doctors," who have fallen behind the procession, the profession, as a whole, has been moving forward with incredible activity upon the substantial basis of scientific research, and if we are to be characterized by any distinctive name, the only one applicable would be "*the new school of scientific medicine.*" Not that our science is complete, for we have still many things to learn and many problems which have thus far resisted all efforts at their solution. But we have learned how to attack these problems, and no one any longer expects that they can be solved by the exercise of the reasoning powers and the facile use of the pen. The old saying has it that "the pen is mightier than the sword." This is no doubt true in politics, but in science the pen is a feeble instrument compared with the test-tube, the microscope, the chemical balance, etc. Nevertheless, I am about to advise well-informed physicians to make greater use of the pen, not for the elucidation of those problems which remain to be solved, but for the purpose of calling the attention of the non-medical portion of the community to the recent achievements of scientific medicine. It is a remarkable and lamentable fact that many persons belonging to the so-called educated classes, are grossly ignorant as regards the present status of medical science. They not only speak of us as "old-school doctors," but they entrust their lives and those of their children to pseudo-scientists who, taking advantage of the popular interest in the great discoveries of the day, make extravagant claims as to the curative power of electricity, the X-ray, oxygen, ozone, or some wonderful microbe destroyer. It seems to me that those familiar with the truths of scientific medicine would do well to give to the public concise and comprehensive statements suitable for publication in newspapers and popular magazines, setting forth the facts and the evidence upon which these facts are accepted by well-informed physicians. If we had an association organized for the purpose

[1] Abstract.

of answering such false statements as have circulation in public print much good might result. Certainly it seems to me that the profession has a duty to perform in this direction, and I hope some steps will be taken to bring about such an organization.

Whenever any new discovery in medicine is announced, some conservative physicians, and often men of reputation in the profession, are sure to commit themselves to a positive denial of the alleged fact. This occurred when the discovery of the tubercle bacillus was announced by Koch, it has occurred with reference to the treatment of diphtheria by antitoxin, and to the preventive treatment of hydrophobia by Pasteur's method. Yet these discoveries are based upon experimental evidence of the most unimpeachable character. To deny their reliability at the present day is simply to show ignorance of the nature of this evidence or a failure to appreciate its scientific value. Often the positive and premature statements of a physician relating to new discoveries in medicine are corrected, or at least regretted at a later date, but sometimes the pride of opinion prevents a retraction in the face of the most conclusive evidence. The result is that such opinions, although they may have been given years ago, are always available to controvert the statements of those who maintain the value of vaccination, of experiments on the lower animals, of the diphtheria antitoxin, etc., and the non-medical public often accept the opinions which coincide with their preconceived views, or arrive at the conclusion that there is nothing settled in our so-called medical science. It should be our aim to remedy this evil by elevating the standard of medical education, as we are doing in many parts of the country; by impressing upon the rising generation of physicians the importance of laboratory work not only as a means of instruction, but for the purpose of cultivating a scientific spirit of inquiry and just appreciation of the value of experimental evidence, and finally, by instructing the public with reference to the present status of scientific medicine, the difference between fact and fancy, between the vagaries of the imagination and the demonstrable results of scientific investigation.

With the progress of scientific medicine we have improved methods of teaching, and it is now generally recognized that reading medical books and listening to lectures is not a sufficient preparation for the practice of medicine any more than the reading of books on navigation would be for the responsible position of captain of an ocean steamer. It is for this reason that we insist upon the study of anatomy in the dissecting-room, the teaching of methods of diagnosis and treatment at the bedside, and of chemistry, physiology, and pathology in the laboratory. It is only within the past few years that our leading medical colleges have provided suitable facilities for practical laboratory work, and even at the present day, as I understand, the laboratory courses are not compulsory in some institutions which provide for a four-years' course of study as a requisite for receiving the degree of doctor of medicine. From my point of view these laboratory courses are a most essential part of the medical curriculum, not only because the student becomes familiar with the use of instruments and methods which will be of inestimable value to him in the practice of his profession, but especially because of the effect of the kind of training he there receives in enabling him to judge of the imperfections of our unaided senses and the small value of opinions in comparison with that of facts capable of demonstration; as also the relative importance of many things which to the superficial observer might appear to be insignificant and unworthy of attention. He learns not to accept the assertion of the professor in the lecture-room or the dictum of any authority if this is in conflict with experimental evidence which he is able to verify for himself. On the other hand, he learns not to have an overweening confidence in his own judgment and powers of observation. He may fail to demonstrate the flagella on the typhoid bacillus or the presence of the plasmodium in the blood of a malarial-fever patient, or of a trace of arsenic in the tissues of one who died with symptoms of arsenical poisoning; but having learned by repeated investigation that the failure was due to his want of expert skill in the use of the microscope or in the application of delicate methods of investigation, he learns that it is unscientific and injudicious to give a premature opinion in regard to any subject under investigation, and especially so when this opinion is based upon negative evidence. Failure to find the tubercle bacillus in a given specimen of sputum has little value unless the examination has been repeatedly made by an expert. It unfortunately too often happens that physicians, after a very perfunctory investigation, give a positive opinion based upon negative evidence. I have investigated, I have not found, consequently it does not exist. This is the attitude of the unscientific but self-satisfied man, and it often leads to mistakes which are not only discreditable to the individual, but damaging to the profession of medicine, for the mistakes of the doctors, as a rule, attract much more attention than their successes. The painstaking work and attention to details required of students engaged in chemical, physiological, bacteriological, or histological studies, and the failure in their attempts to repeat an experiment or demonstration, if

through haste or carelessness they neglect any step in the necessary technical processes, constitute an invaluable lesson. Indeed, the scientific medicine of the present day can only be taught by such methods, and the scientific physician of the future must make his way to fame and fortune by traveling this somewhat difficult and time-consuming road.

Having referred to the injurious consequences of premature and unfounded opinions, especially when given by men of prominence in the profession, I desire to call attention to the best method of counteracting such mischief. This is undoubtedly by united action on the part of the more enlightened members of the profession in behalf of truth and progress. This assistance we have had in combatting the anti-vivisection bill introduced into the United States Senate and vigorously pressed by the members of the Washington Humane Society, supported by their misguided friends in various parts of the country. The result has been eminently satisfactory, and shows that when exercised in a just cause the influence of the medical profession is a factor which will not be ignored even by the Senate of the United States.

The principle involved in the construction of the compound microscope was discovered as long ago as the Sixteenth Century, but it is only within the present century, and principally during the last half of the century, that those improvements have been made which have made it available for etiological and histological studies. There is, however, a growing disposition to suspect that our microscopes, notwithstanding the great degree of perfection attained in their construction, are still inadequate to the task of revealing to us the specific infectious agents of cer tain diseases, because of their minute size.

In a late number of the *Centralblatt für Bakteriologie*, Löffler and Frosch have published their official report of investigations made for the German Government, relating to the etiology of foot and mouth disease of cattle, the results of which are very interesting in this connection. As in smallpox, rabies, scarlet fever, typhus fever, and certain other infectious diseases, the efforts heretofore made to demonstrate the specific etiological agent in foot and mouth disease have been unsuccessful. The carefully conducted investigations of Löffler and Frosch also failed to demonstrate the presence of any specific micro-organism in the lymph drawn with proper precautions from about the mouths or udders of infected cows. Cultures in various media inoculated with this lymph remained sterile and no micro-organism could be demonstrated by the use of the microscope in stained preparations. Nevertheless, experiments showed that this lymph was infectious material, and that calves inoculated with a very small amount of it invariably developed the disease in two or three days. Very much to the surprise of the investigators named, they found that lymph which had been filtered through a porcelain cylinder, which was proved by experiment to arrest the passage of bacteria, retained its full infecting power. That the result was due to the multiplication of the infectious agent in the body of the infected animal and not merely to the introduction of a very toxic non-living substance present in the lymph, was shown by the small dose required to produce the disease ($\frac{1}{10}$ to $\frac{1}{40}$ c.c. of filtered lymph), and also by the fact that the disease could be transmitted to other animals by inoculating them with like amounts of lymph taken from the vesicles which developed in the calves inoculated with filtrated lymph. The authors conclude their report as follows:

"It seems difficult to escape the conclusion that the action of filtered lymph does not depend upon a soluble constituent, but upon an agent capable of self-multiplication. This must be so small that it can pass through a filter which retains the smallest known bacteria. The smallest hitherto known bacterium is the influenza bacillus of Pfeiffer."

In the department of etiology the most brilliant and farreaching discoveries of the century are the discovery of the anthrax bacillus (1850) and demonstration of its etiological relation to the disease with which it is associated—by Davaine, Pasteur, Koch, and others (1863–1875); the discovery of the tubercle bacillus by Koch (1882) and the discovery of the malarial parasite by Laveran (1879). These discoveries, so essential to the progress of scientific medicine, would evidently have been impossible without the aid of the compound microscope. But just here I wish to insist upon another point, which is, that for the untrained eye the microscope is little better than a toy, and it may even be regarded as a dangerous instrument because of the inevitable mistakes which the novice will make if he undertakes to decide questions of diagnosis by the use of high power oil-immersion objectives without having had the necessary training for such delicate work.

For the illiterate, and even for many of the so-called educated class, the whole of medicine consists in the cure of disease by medicines, or by some agency, natural or supernatural, and a failure to cure is evidence that medicine is not a science. We readily admit that the cure of disease is one of the principal objects which medical science has in view, and that from a scientific standpoint therapeutics is very much behind some of the other branches of medicine. This is shown by the diversity of remedies prescribed for certain diseases and the failure of any one of these remedies to effect a cure in many

cases. But, on the other hand, therapeutics has made great advances during recent years, and by the application of scientific methods of research the exact value of alleged remedies and of various methods of treatment is now determined with far greater precision than formerly. Recently several additions have been made to the list of specific therapeutic agents, and there is good reason to believe that further discoveries in this direction will be made as a result of investigations now being conducted in pathological laboratories in various parts of the world. Among the most important recent discoveries in this department of scientific medicine I may mention the use of thyroid extract for the cure of myxedema and the antitoxin of diphtheria. The discovery of the diphtheria antitoxin promises to be as important for therapeutics as the discovery of the anthrax bacillus was for bacteriology, and will no doubt henceforth be regarded as one of the most notable achievements of the century. It resulted directly from laboratory experiments relating to the production of immunity. While the practical results of this discovery have been most notable in the case of diphtheria, some success has been attained in the specific treatment of tetanus, streptococcus infection, pneumonia, and even in tuberculosis. These results give encouragement to the hope that future investigations may develop methods of obtaining these antitoxic substances in such form and amount as will enable us to successfully use them in the treatment of those infectious diseases for which we have not heretofore had a specific remedy. Another recent discovery of considerable importance from several points of view, is the so-called Widal-reaction.

Where thousands have been saved by the timely administration of suitable medicines or by the skilfully performed operation of the surgeon, tens of thousands have been saved by preventive medicine. And preventive medicine is to day established upon a strictly scientific foundation. If our practice was *pari passu* with our knowledge, infectious disease should be almost unknown in civilized countries, and those degenerative changes of vital organs which result from excesses of various kinds would cease to play a leading part in our mortuary statistics. But while our knowledge is still incomplete in some directions, and while individuals and communities constantly fail to act in accordance with the well-established laws of health and the scientific data which furnish the basis of preventive medicine, the saving of life directly traceable to this knowledge is enormous.

The time at my disposal is entirely inadequate for the purpose of setting forth the present status of scientific medicine, but I trust enough has been said to justify the claim that we are not "old-school doctors" and to show that medicine has not been behind other branches of science in taking advantage of improved methods of research and in establishing itself upon the sound basis of facts, demonstrated by experiment and observation with instruments of precision.

What has been said will also prove that there is no room for creeds and pathies in medicine, any more than in astronomy, geology, or botany. Every man is entitled to his own opinion upon any unsettled problem, but if he entertains an opinion in conflict with ascertained facts, he simply shows his ignorance. There is no restriction placed upon any physician who graduates from our regular schools as to the mode of treatment he should pursue in any given case. If he sees fit to prescribe a bread pill or a hundredth trituration of carbo vegitabilis, there is no professional rule of ethics to prevent him from doing so. But if his patient dies from diphtheria because of his failure to administer a proper remedy, or if he recklessly infects a wound with dirty fingers or instruments, or transfers pathogenic streptococci from a case of phlegmonous erysipelas to the interior of the uterus of a puerperal woman, it would appear that the courts should have something to say as to his fitness to practise medicine. There is, however, nothing in the code of ethics which will prevent him from associating with reputable practitioners. But no matter where or when he obtained his medical degree, he can scarcely be said to belong to the modern school of scientific medicine. We must not fail to recognize, however, that the progress of knowledge has been so rapid that it is impossible for the busy practitioner to keep pace with it, and that even the requirement now generally adopted by our leading medical sohools for a four-years' course of study, is inadequate for the attainment of such a degree of professional knowledge and practical skill in diagnosis and therapeutics as is desirable for one who intends to practise scientific medicine.

THE DIFFERENTIAL DIAGNOSIS BETWEEN DENGUE AND YELLOW FEVER, WITH SOME ACCOUNT OF THE EPIDEMIC OF 1897 IN TEXAS.[1]

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THE diagnosis of disease is universally and justly regarded as the foundation-stone upon which rests the entire superstructure of practical medicine. The question, however, is in most instances a personal one only; it concerns the health, life, or death of

[1] Abstract of a paper read at the Forty-ninth Annual Meeting of the American Medical Association, Denver, Col., June 7, 8, and 9, 1898.

the individual affected, his family and friends, the public in so far as he may be a useful and influential member of society, and the physician as affording a basis for his prognosis and treatment. But there are occasions when far more momentous interests are implicated in the correct diagnosis of prevailing diseases. A complete paralysis of commerce, arrest of the wheels of industry, enforced idleness with the consequent poverty and suffering of thousands, enormous depreciation in property values of every kind, universal fear and panic, and the possibility of widespread death and desolation may be involved. To the physician himself an error in diagnosis ordinarily implies results which are comparatively inconsequential. On the other hand, there are times when such an error means public denunciation or disapprobation. A correct diagnosis, even when opposed to commercial interests, may subject him to loss of reputation and business which may last for a lifetime.

This was the state of affairs in Texas during the summer and autumn of 1897. So long as yellow fever was supposed to prevail east of the Mississippi only, and that dengue was the epidemic disease in Texas, peace reigned, but when the trouble came to our own doors by the announcement of yellow fever in Galveston and Houston, there arose a contest over the subject of diagnosis. With visits of local experts from city to city, and the gradual passing of the epidemic with no record of deaths from yellow fever, there was a popular conviction that a stupendous error had been committed by those who believed in the presence of that disease. These are matters of such recent history it is only necessary to mention them. The majority both of physicians and laymen in the State are firm in the conviction that dengue alone was the disease which was prevalent in Texas during the past summer. A minority believe that yellow fever alone prevailed, but that owing to its mild form, indisposition to spread, exceptionally small mortality, and resemblance to dengue, it was usually unrecognized. Confusion has arisen in the minds of many. They naturally ask themselves, "Are the landmarks all swept away? Have the authorities led us astray? Has a new disease, *anomalous dengue*, made its appearance? Is there no such thing as dengue? Is the so-called dengue a mild form of yellow fever, and does the latter arise *de novo*?"

The important issues dependent upon a knowledge and recognition of the truth relative to these points render it not only pertinent, but imperative, upon the part of those who are familiar with the facts to study them in concert. Now that the obscuring mists due to commercialism, prejudice, and passion have for the most part passed away, we approach the subject from a scientific standpoint. It is with this end in view, and in no spirit of dogmatism or self-assertion, that I introduce the matter for consideration.

The following hypotheses have been assumed in relation to the recent epidemic: (1) The disease was dengue only. There was no yellow fever in Galveston, Houston, or the State of Texas in 1897. (2) There were anomalous cases of dengue presenting all the symptoms of yellow fever, but proven not to be that disease by the indisposition to spread from numerous foci, and the low mortality-rate. (3) During the progress of an intense epidemic of dengue throughout the State, in Galveston, Houston, and possibly other places, yellow fever made its appearance, and in consequence of its mild form and resemblance to the prevalent disease was generally unrecognized. (4) An imputed hypothesis that the epidemic of 1897 in Texas was yellow fever only. (5) A few cases terminating fatally and others attended by marked jaundice and albuminuria were denominated acute infectious jaundice (Weil's disease).

In order to obtain definite information upon the subject a circular of inquiry was distributed to a limited extent. I regret very much that replies could not have been obtained from every infected place in the State so as to have made the report exhaustive. Summarizing reports obtained from twenty observers in eighteen places we find as follows:

The epidemic of dengue of 1897 prevailed chiefly in Southern Central Texas within a radius of 200 miles from Houston, but was prevalent to a limited degree 300 miles to the north. San Antonio, Houston, and Galveston, followed by Schulenberg and Navasota, appear to have been most intensely infected, the proportion of population in these places affected varying from seventy-five to ninety per cent. Belton, Palestine, and Huntsville followed closely with a percentage of sixty to sixty-five. In the extreme northern and eastern portions of the State, as in Gainesville, Sherman, Bonham, Terrell, and Tyler, there were but a few sporadic cases. At Dallas and Paris a very mild epidemic affected not more than six per cent. of the population. San Antonio, Galveston, and Houston seem to have been the centers of infection, as appears from the following statement: In Palestine, a railroad center about 150 miles north of Houston and 200 miles northeast of San Antonio, with double daily train service, Dr. Link states the probable origin was from these two cities. Dr. Tabor reports from Bryan, which is about 100 miles from Houston, with direct rail connection, that both the first and second cases were in persons who had been exposed in Houston. Dr.

Thomason reports from Huntsville, about seventy miles north of Houston, with direct train service with the latter place and Galveston, that the first case was that of a young lady from Galveston, and that other foci of infection were developed by persons from Houston and Galveston. Austin's first case was in a hotel clerk recently returned from San Antonio. Dr. Lee reports from Galveston that his first case, seen July 29th, was from San Antonio. The first two cases seen by the writer, August 11th, were in the persons of young men who had returned to Galveston from the Interstate Military Drill at San Antonio. Schulenberg is about equidistant from Houston and San Antonio, and may have been infected from either. Navasota is only about seventy miles from Houston.

The intensity of the disease at San Antonio, the presence there of companies of militia not only from numerous points in the State, but from States east of the Mississippi, the coincidence in time (latter part of July) of the return of the militia to their homes with the outbreak of the disease, and the positive identification of the first cases in several places in persons who had returned from the encampment, is evidence going to prove that San Antonio was the initial point of infection in the State. As to the origin of the disease in the latter city, I have no means of tracing it, but can only say that ample opportunity for conveyance of dengue was afforded by the collection there from July 19th to 26th of troops and visitors from points east of the Mississippi where the disease had already made its appearance.

Further confirmation is also afforded by the facts above cited that dengue is an infectious, a portable, and contagious disease, *i. e.*, the specific micro-organism which produces it may escape from the body of an infected individual and be transmitted by persons and fomites to other persons, thus speedily multiplying foci of infection and accounting for the rapidity of its dissemination. The fact previously observed that the progress of the disease is arrested by the advent of cold weather or frost, has also been confirmed by the consensus of the statements received. As to the effect of meteorological and hygienic conditions, the majority of observers describe the existing weather as excessively hot and dry. The mean daily temperature in Galveston during the month of October, 1897, was nearly eight degrees higher than during the corresponding month of the three previous years, and the continuance of unusually hot weather during November and December was the subject of general comment. Local sanitary conditions do not appear to have played any important part in the propagation of the disease. Dr. Paschal, however, calls attention to the excessively unsanitary condition of San Antonio at the time of the outbreak, and Dr. Tabor ascribes the comparative immunity in Bryan (only 100 cases out of a population of 4000) to the extraordinary precautions to better the sanitary condition of the town.

In regard to the symptomatology, I have not attempted to obtain information as to the complete clinical history of the cases under consideration, but rather to determine the distinctive value of those symptoms which have heretofore been regarded as of great importance in the differentiation between dengue and yellow fever, *viz.:* the presence of an eruption, hemorrhages, nausea, and vomiting, evidence of an acute nephritis, as albuminuria, scantiness of urine, presence of casts, uremia, etc., divergent pulse and temperature, jaundice and mortality.

There is almost perfect unanimity upon the part of observers as to the presence of an eruption, the proportion with this symptom varying from twenty-five to ninety per cent.; seventy-five per cent. would be a fair average. It is variously described as miliary, scarlatiniform, rubeloid, erythematous, reddish papules, macular dermatitis, urticarial, desquamative, as localized upon the face and neck, upon the face and upper part of the body, with profuse perspiration, irregular as to time of appearance, coming on the second or fourth day or end of fever, hyperemia appearing on the first day. Dr. Peeples notes the fact that while frequently absent in adults, an eruption was almost invariably present in children. The consensus of opinion is that glandular involvement occurred to a very limited extent in this epidemic, the majority of observers not noting this symptom at all, but one observer mentioning enlargement of the cervical glands and tonsils in twenty-five per cent. of the cases; another the connection between enlargement of the glands and the rash; another observed swelling of parotid and sublingual, inguinal, and suboccipital glands, especially in children; one observer noted enlargement of the submaxillary glands in twenty per cent. of his cases. With but three exceptions every observer noted the occurrence of hemorrhages. The nose, throat, stomach, intestines, uterus, and kidneys were the chief sources mentioned. The proportion in which this symptom was present varied from one to ten per cent. Three or four observed black vomit. Nausea and vomiting were notable symptoms, and occurred in a large number of the cases, varying from eighty to ninety per cent. With but few exceptions it was described as severe, excessive, incessant, almost universal, etc.

Unfortunately, observations pertaining to the urine were made so infrequently and imperfectly as

to render them of but little value. Most of the observers made no examination at all; a few examined for albumin only in the worst cases. Dr. Wilkinson of Galveston, out of 500 cases, says he tested for albumin in many and found it absent, but the specific gravity was generally high. Dr. Lee of Galveston states he examined for albumin in 50 cases out of 490. Eight of these had previous kidney trouble; of the remaining 42, 20 showed slight albuminuria on the third and fourth days, and in six albumin was present in large amounts. Dr. J. M. Coble, Dallas, examined the urine in twenty-five per cent. of his cases, and found slight albuminuria in ten per cent. of them. Drs. Wilson and Harris of Navasota only made urinary examinations toward the end of the epidemic in about fifty cases. In forty of these albumin was found in considerable quantity. The urine was diminished in quantity and highly colored; casts and blood-cells occurred in three cases, and uremic symptoms in four. Dr. Taylor Hudson of Belton tested the urine only in a few suspicious cases, and found albumin in several; the urine was usually dark and diminished in quantity, uremic symptoms pronounced in several patients. Dr. D. L. Peeples, Navasota, found albumin from slight traces to abundance; in some cases there was almost total suppression, color varying from a deep straw to the color of blood. Dr. R. R. Walker, Paris, found albumin in twenty-five per cent. of his cases. Dr. W. W. Walker, Schulenberg, only tested for albumin in worst cases, found it in ten; in some in large amounts. The remainder of the reporters fail to note condition of the urine. If dengue was the only disease prevalent, albuminuria is not a rare symptom in that disease, which is contrary to the opinion heretofore entertained.

Ten out of 16 observers mention that the pulse was abnormally slow and not in proportion to the pyrexia; 3 state the ratio was normal, and 3 made no note of the symptom. Our reporters mention jaundice as present in about seven per cent. One, Dr. Wilkinson of Galveston, mentions jaundice as being of frequent occurrence, and of severe grade after October 1st. One notes it as generally present of a mild grade; another states that it was mild in ten per cent., and severe in two to five per cent. One found it more or less present, and seven failed to note icterus at all. There is almost perfect unanimity as to want of mortality in the recent epidemic. The few deaths occurring were usually ascribed to some complication. As regards progressive severity, a majority state there was no marked difference; a few assert aggravation in the beginning and in the midst of the epidemic. Dr. Wilkinson notes mildness in August, increased severity in September, progressing to violence in October. Only two or three out of the twenty suspected the presence of yellow fever.

The onset was usually sudden, attended by slight rigors or chilly sensations, with more or less severe headache, and pains in the back, limbs, and joints. As regards the paroxysm, there is a remarkable discrepancy in the statements of Drs. Lee and Wilkinson, each of whom treated about 500 cases. Dr. W. (I quote his exact language) states: "The fever in all my observations contained but the one single paroxysm; there was no secondary fever from first to last; it departed by lysis after three or four days' duration, and never returned except in cases of relapse several weeks later." Dr. Lee, on the contrary, says: "In a large proportion of the above mentioned cases two paroxysms were noticeable, the first coming on usually without positive chill or chilliness; temperature usually high in the beginning became, after slight remission, high again toward end of the attack." It is difficult to reconcile such contradictions. The probabilities are that there is no invariable rule in regard to the paroxysm. In ten cases at the Sealy Hospital, where careful thermometric observations were made, there was only one paroxysm in seven. In one there was an exacerbation in the afternoon of the day following the return to normal temperature; in one the fever was of remittent type, rising at mid-day for three successive days; in one there was a slight return of fever on the evening of the first day after the temperature reached normal.

Before proceeding to make any deductions from the foregoing, I beg leave to show what has been the accepted teaching by referring my readers to the following authorities upon the differential diagnosis of the two diseases under consideration. H. D. Schmidt, on Dengue, "Pepper's System of Med.," pp. 884–885. Matas, Keating's "Cyclopedia," vol. i, p. 894, quotes Holliday, who makes a comparison of the symptoms as follows:

YELLOW FEVER.	DENGUE.
Temperature rising regularly.	Temperature rising irregularly.
Tongue, white center, red edges, pointed.	Tongue, broad, white, indented edges, rarely red.
Stomach irritable, vomiting frequent.	Vomiting rare.
Conjunctivæ congested, jaundice appearing early.	Conjunctivæ rarely red, jaundice never observed.
Secretions all suffering, urine scanty, often albuminous, suppression frequent.	Secretions natural, urine *usually* normal, sometimes (exceptionally) traces of albumin.
Hemorrhages frequent and alarming, black vomit an urgent symptom.	Hemorrhages slight, black vomit very rare.

In regard to the condition of the urine in dengue, Matas observes (see footnote p. 889, Keating) that "in tropical pyrexiæ it is always a matter of great importance, both from the diagnostic and prognostic

standpoint." Eugene Foster ("Ref. Handbook Med. Sciences," vol. ii, p. 397) gives the following summary of the points of similarity and dissimilarity in dengue and yellow fever:

In time of appearance, and generally in geographical distribution, they seem related to one another. Dengue has, however, prevailed in Asia and Egypt where yellow fever is unknown. Both diseases are arrested by severe frosts. Both dengue and yellow fever are diseases characterized by one febrile paroxysm. In order to show contrast, the symptoms will be arranged in parallel columns:

YELLOW FEVER.	DENGUE.
	The fever regular until the acme is reached, when a short stadium of a few hours occurs, followed by a remission, when a second rise of temperature takes place, but not reaching the former height.
The pulse becomes slower, while the temperature rises.	The pulse increases in frequency with the rise of temperature.
Fever lasts seventy-two hours.	Fever lasts five to eight days.
Vomiting frequent.	Vomiting rare.
Eruption rare.	Eruption common.
Jaundice almost invariably present.	Jaundice extremely rare.
Urine scanty, frequently albuminous, and often suppressed.	Urine generally high-colored, normal in quantity, free from albumin, and never suppressed.
Hemorrhages frequent, alarming, and often fatal.	Tendency to hemorrhage from nose, gums, bowels, lungs, and womb, with occasional black vomit, but hemorrhages as a rule insignificant.
Often fatal.	Proverbially non-fatal.
One attack protects from another; not protective against dengue.	One attack not protective against another; not protective against yellow fever.

Sternberg (Buck's "Ref. Handbook, vol. viii, p. 60) says: "Of the three prominent features making up the clinical tableau of yellow fever, *viz.*, a yellow skin, highly albuminous urine, and black vomit, only one is a constant character which can serve in establishing the diagnosis in mild cases; this is the presence of albumin in the urine. At some period in the disease, even in the mildest cases, there will be a distinct trace of albumin in the urine as shown by the usual test, and this will usually be sufficiently abundant to leave no doubt in the mind of the observer as to the nature of the precipitate. The value of this test in the differential diagnosis is indisputable. The second stage of the disease is commonly, however, well-marked in non-fatal cases, and is its most characteristic feature; the remarkably slow and soft pulse, the evident prostration of the vital powers, although the patient may be comfortable and even cheerful and desirous of getting up and taking food; the yellow tinge of conjunctivæ and skin (not always present); the tenderness on pressure in the epigastric region, and often a feeling of weight and distress, attended with intense thirst and vomiting of a transparent acid fluid, or of the characteristic black vomit; the tendency to passive hemorrhages from the mucous surface of the mouth or nose, oozing of dark blood from the gums, or lips or sides of the red and fissured tongue; the scanty urinary secretion, and the presence of albumin, usually in considerable amount, constitute an unmistakable ensemble of symptoms."

It appears from the above quotations that the symptoms which have heretofore been relied upon to differentiate between yellow fever and dengue, are the occurrence in the former of albuminuria, the characteristic facies (inclusive of jaundice), the divergent pulse and temperature, excessive irritability of the stomach, and increased disposition to hemorrhages. The absence of such symptoms in the main, the presence of an eruption in a large proportion of cases, and a want of mortality are characteristic of dengue. In the epidemic herein described we have an apparently inextricable confusion. A widespread epidemic of fever presented the symptomatology of yellow fever in many instances, but with the eruption of dengue and practically with no mortality. One of two deductions is irresistible; either the two diseases approximate more intimately in their symptomatology than has heretofore been taught, or else yellow fever of remarkably mild type has been associated to a greater or less degree with dengue. Granting the reliability of the testimony herein presented both conclusions are warrantable. I shall not attempt here to solve this problem so far as the epidemic of the interior is concerned, but will present the evidence which is convincing to my mind that the latter proposition is true as to the coast cities of Galveston and Houston.

Before doing so, however, let me refer briefly to certain facts in regard to the epidemic east of the Mississippi, taken chiefly from the report of the Louisiana State Board of Health, dated December 6, 1897. The first death from yellow fever was reported by Dr. J. M. Holloway of Louisville, Ky., about August 18th, the patient having gone to that city from New Orleans *via* Ocean Springs, where the disease was supposed to have been contracted. Subsequent to this four official investigations were made as to the nature of the epidemic at Ocean Springs, resulting as follows: (1) The visit of Dr. S. R. Oliphant, President of the Louisiana Board of Health, August 22d, 1897, who reports finding an epidemic had been prevailing the previous six weeks, that 400 cases had occurred in the practice of two physicians without a single resultant death, and that it was considered to be dengue of mild type. (2) On August 23d a commission of experts from the New Orleans Board, from the Mississippi State Board, and others, signed a report which concludes as follows: "After a careful inspection and examina-

tion of the aforesaid cases we are positive in our opinion that the disease is dengue and that in no case is there, or has there been, any symptom which would lead to even a suspicion of a more serious disease." (3) On August 27th we have a report of another commission to which the name of the health-officer of Alabama is added, stating "in reply to your request we have again investigated the fever at Ocean Springs, which is abating and is absolutely without fatality. The conclusion arrived at is that *it is not yellow fever*." (4) On September 6th we have the following statement: "The patient died Sunday night, and early Monday morning the expected autopsy was performed by the bacteriologist of the board in the presence of the medical gentlemen assembled. Unmistakable evidence of yellow fever having been revealed, we arrived at a unanimous verdict."

According to Dr. Oliphant the grand total of cases in New Orleans did not reach 2000 nor the deaths 300, a mortality-rate of fifteen per cent. based upon reported cases which would doubtless be much smaller if founded upon the actual number. Another significant fact noted by Dr. Oliphant in the epidemic, which verifies the history of previous ones in New Orleans and elsewhere, is that yellow fever does not burst forth suddenly, but gathers volume and force after smouldering for a time, *e. g.*, it was introduced into Edwards, Miss., August 8th, but gained no headway until the middle of September. Confirmatory as to the remarkable mildness of the last epidemic[1] Dr. L. Sexton writes from New Orleans, September 20th, "*Our present death-rate is lower than in any epidemic of yellow fever.* If the present death-rate prevails throughout this visitation we will have to send around a subscription-list for our undertakers."

What bearing have these facts upon conditions as they existed in Texas? In my opinion they are convincing, when taken in connection with the clinical history of certain cases, that the epidemic upon the Texas Gulf coast was similar to that in Louisiana, Mississippi, and Alabama, the results being modified by the late introduction of yellow-fever infection and by the presence of unfavorable conditions for its dissemination. It should be remembered that the declaration of quarantine at Galveston was made on September 10th, nearly a month after the recognition of yellow fever at Ocean Springs, that the latter place is directly upon a common route of travel between Eastern and Texas points, and that a month subsequently the diagnosis of yellow fever in Galveston and Houston was made by Dr. Guiteras. Under such circumstances it is not surprising that yellow-fever infection should have been introduced into Texas; nor should it be a matter of wonderment that it should not have been generally recognized, when we take into consideration that it came in the guise of dengue, was introduced late in the season into localities where the conditions were unfavorable for its spread, and that according to all testimony it was the mildest epidemic of yellow fever ever known in the history of the country.

Admitting that there is greater similarity in the symptomatology of the two diseases than has heretofore been acknowledged, the question arises How can they be differentiated? In my opinion chiefly by the occurrence of a complicating acute nephritis in yellow fever and its absence in dengue. In the latter simple parenchymatous changes may occur in the kidneys and be manifested by an evanescent and mild albuminuria, while in the former, in a series of cases, many will afford incontestable evidence of the occurrence of a severe nephritis, *viz.*, scanty urine of high color and specific gravity, intense and persistent albuminuria, hematuria, casts, decided tendency to suppression and the accompanying uremia.

One of the arguments which has been repeatedly used against the existence of yellow fever in Texas during the past season, was the want of mortality. Upon this point let me quote Dr. Morris.[1] "From October 1 to November 18, 1897, the death-rate in Houston was 33⅓ per cent. greater than in the corresponding period of 1896." The causes given in death-certificates are as follows: Senility 11 (four of whom were not over sixty); dengue 5; enteritis and gastritis 11; fever 10; meningitis 1; kidney disease 5. The record of Galveston does not show any increase of deaths during the months of August, September, and October over the three previous years. There were five deaths, however, preceded by symptoms of yellow fever. It is a significant circumstance that in four of these uremia was given in the certificate as the cause of death. In the other congestion of the lungs was mentioned as the primary, and bilious fever as the remote, cause.

Those who deny the existence of yellow fever in Texas during the past season rely chiefly upon the apparent indisposition of the disease to spread from numerous foci. In other words, they contend that the presence of the infection necessarily involves its dissemination. No extended argument is requisite to demonstrate the fallacy of such conclusions. The pathogenic micro-organism of yellow fever is a facultative parasite, but its ordinary mode of life is saprophytic. It grows and develops outside of the body when the conditions are favorable for its repro-

American Medico-Surgical Bulletin, page 903, October 10, 1897.

[1] *S. W. Med. Record*, pp. 413-414, January, 1898.

duction. The fact that the soil of Texas was an unfavorable one for the multiplication of the yellow-fever germ last season is an adequate explanation of the history of the recent epidemic. It is not contended that the hygienic condition in our cities was perfect, but that the combination of circumstances was antagonistic to the extensive dispersion of the infection. Instead of being a blot upon the sanitary escutcheon of Houston and Galveston, it is another demonstration of the fact, which has previously been observed, that yellow fever may be brought to these places without necessarily involving an extensive epidemic or serious mortality.

Two important lessons should be emphasized: (1) the urgency of promptly recognizing the early cases, and calling them by their proper name, for by this means only may subsequent disaster in many instances be averted; (2) we should put our houses in order, in other words, adopt every possible method of domiciliary and municipal cleanliness. Napoleon is said to have remarked that "Providence was on the side with the strongest artillery." When yellow fever is around, Providence is on the side of the town with the best sewers. Again has it been demonstrated that yellow fever may masquerade in the garb of dengue, and that the latter is a portable disease. Leaving out of the case the probable association with yellow fever, it becomes a serious question whether dengue should not be considered a quarantinable disease. The suffering and expense incident to an extensive epidemic like the one of last season would certainly appear to justify measures of prevention.

ELECTRICITY IN GYNECOLOGY.[1]

BY HENRY J. GARRIGUES, M.D.,
OF NEW YORK.

WE shall, perhaps, arrive at an answer to the question propounded by the Society in the easiest and clearest way by passing in review the different kinds of electricity—franklinism, faradism, and galvanism.

Franklinism, or static electricity, has never played a great rôle in gynecology. Few gynecologists own the expensive Holtz machine. It belongs rather to the domain of the neurologist, and the general practitioner. Those who have it will, however, probably find its current of value as a general nerve tonic, and capable of subduing local pain, when chiefly of a neuralgic origin.

Faradism, or the interrupted induced electric current, has widened its therapeutic field considerably of late years. The old-time little machine with its short, coarse wire has given way to the modern apparatus with a secondary coil composed of three wires of different gage, measuring together 1½ miles in length. By improved mechanical contrivances the pain incident to the application of this current may be greatly reduced or abolished altogether. By using a thicker, shorter wire we obtain a stimulating effect which may be utilized to the greatest advantage in gynecological disturbances, such as subinvolution, infantile uterus, amenorrhea, sterility, or uterine hemorrhage. For subinvolution I take it to be the best of all known remedies. It works in two ways, partly by disintegrating and eliminating diseased tissues, partly by causing the muscle-fibers, composing the bulk of the uterine walls, to contract. A similar effect may be expected in cases of chronic metritis which do not originate in childbirth.

For infantile uterus this remedy is likewise the best known, but here the prognosis is less favorable, as the condition in most cases is incurable.

In amenorrhea I have been so successful with galvanism that I have not had occasion to test the value of inductional electricity, but it is highly praised by those who use it.

For uterine hemorrhage, if only caused by laxity of tissue and lack of proper innervation, the bipolar electrode, applied either in the vagina, or in the uterus, is a powerful therapeutic agent. In this connection I may also recall the peerless value of faradization in securing uterine contraction in cases of post-partum hemorrhage.

In the long, thin wire, on the other hand, we have of late years obtained a most valuable addition to our therapeutic armamentarium. This high-tension current has great analgesic power. It answers, therefore, an excellent purpose in cases of dysmenorrhea, pelvic pain, dyspareunia, coccygodynia, and such cases of salpingo-oophoritis, and local peritonitis, in which the nervous elements predominate over the inflammatory.

Galvanism.—Of still greater importance is the galvanic current in gynecological treatment, and it is serviceable in a variety of ways. By using a large, wet electrode on the abdomen, and a large, wet electrode in the vagina, we can send a strong current through the uterus, or the appendages, where it exercises its interpolar, electrolytic action. Thus it becomes a valuable therapeutic agent in the treatment of chronic metritis, and chronic or subacute forms of inflammation of the adnexa, with or without pelvic exudation, or deposits of organized lymph. By this means I have saved many an ovary which otherwise would have been sacrificed. This treatment is effective in many cases in which tincture of iodin, ichthyol-glycerin, and hot douches, fail to give the desired results; but, if there is cystic degeneration, one helps

[1] Read at the Twenty-third Annual Meeting of the American Gynecological Society, Boston, Mass., May 24, 25, and 26, 1898, in discussion of the topic, "Has Electricity Ceased To Be a Useful Therapeutic Agent in Gynecology?"

as little as the other, and surgical interference becomes necessary.

It often happens that there is produced a painful swelling around the stumps, left by salpingo-oophorectomy, or supravaginal amputation of the uterus. This condition is easily cured by the galvanic current.

By connecting an intra-uterine platinum electrode with the negative pole of the battery we have the best remedy for functional amenorrhea I know of. A similar electrode made of copper and connected with the positive pole destroys the gonococcus, and has, therefore, been used in gonorrhea of the cervix. It is, however, apt to produce stenosis of the cervical canal, and must be used cautiously.

In extra-uterine pregnancy electricity is used much less now than some years ago, but if this condition were found in an early stage, say during the first two months of pregnancy, in a woman personally dear to me, I would prefer it to surgical interference. Facts remain facts, even if lost sight of for a time, and numerous cases observed by men whose diagnostic skill is unimpeachable have been recorded in which this method has killed the fetus and has not had any bad influence on the mother. Either galvanism or faradism may be used, preferably the former.

The other chief form of galvanism is galvanocauterization, and in this form, electricity, far from being obsolete, has constantly enlarged its field of usefulness. A mild degree of cauterization used without an anesthetic is one of the best remedies for ectropion. Cervical membranes that have resisted all sorts of applications, douches, and suppositories sometimes become healthy by a few applications of a nearly dry gas-carbon electrode connected with the positive pole and applied to the everted part or through the whole length of the canal. A similar treatment carried out with the intra-uterine platinum electrode has often allowed me to cure a menorrhagia which had resisted thorough curetting by my own hand.

In the Apostoli treatment for uterine fibroids we have a combination of galvanocauterization of the mucous membrane of the uterus and of interpolar electrolysis. It is not an infallible remedy; I have seen cases in which it had no effect; but the worst cases are the most grateful. In the majority of cases, pain ceases very soon, menstruation becomes normal, the patient regains general health, and the tumor is reduced in size and becomes stationary. In one patient whose uterus reached an inch above the umbilicus there was no diminution, but when I saw her six years later, the uterus had not grown, and she had been well in the meantime. In some cases I have seen tumors pushed out of the wall so as to form prominences in the peritoneal cavity. Only in one case have I seen the myoma disappear altogether, but this is so marked a case that I take this opportunity of publishing its chief features. Mrs. K., from New Orleans, forty-two years old, had a myoma in the posterior wall of the uterus as large as a medium-sized orange. She suffered great pain, had fearful hemorrhages, which only could be controlled by tamponade, and she led the life of an invalid. She had thirty eight applications in nine months, all pain disappeared, menstruation became normal, and she became a healthy woman, so that treatment was discontinued. When seen a year later, there was not a trace of the tumor to be felt; and she was in perfect health. One such case is enough for me nearly always to recommend a trial of electricity before resorting to operative procedures as did Thomas Heith, the most successful operator for fibroids in his time.

In operations for carcinoma the galvanocautery is of great value, whether used with the dome-shaped cautery to sear a cavity left by the curette, or with a wire to extirpate the cervix, or with a knife with which we either can cut off a portion of the uterus or remove the whole uterus with its appendages. The last-named method is recognized as the best of all methods of vaginal hysterectomy for carcinoma, because it avoids wound infection and perhaps even destroys the germs of the disease at some distance beyond the place where it is applied.

In closing I will only recall the value of the electric lamp in abdominal or vaginal operations.

Far from having ceased to be a useful therapeutic agent in gynecology, electricity not only holds its own, but has of late years enlarged its territory in different directions and deserves the closest study from every gynecologist.

HAS ELECTRICITY CEASED TO BE A USEFUL THERAPEUTIC AGENT IN GYNECOLOGY?[1]

BY EGBERT H. GRANDIN, M.D.,
OF NEW YORK.

IN taking the affirmative of this question, it seems fitting that I should glance back ten years in order to suitably account for the faith that is in me to-day. From 1884 to 1892 I delved deep into the mysteries of electricity and fully equipped myself for the formation of an unbiased opinion in reference to its sphere of utility in the treatment of the diseases of women. The outcome of my study and of my practical experience was the publication of a monograph on the subject, the keynote of which was a

[1] Read at the Twenty-third Annual Meeting of the American Gynecological Society, Boston, May 24, 25, and 26, 1898.

protest against the ultra enthusiasm which pervaded other workers in a similar field. As I read that monograph in the light of views held by me to-day I regret little that I wrote then, with the single exception of the opinion I advanced in regard to the treatment of ectopic gestation; an opinion founded on what was then the weight of distinguished authority, controlled by a limited amount of personal experience. The doctrine preached by me in this monograph was simply this: Electricity constitutes a valuable adjuvant to other routine methods of treatment; its rôle is palliative, pure and simple. To-day, even as I have rejected certain other routine methods of treatment because experience has taught me their futility, even so have I shelved electricity, because experience has taught me that cure is possible through resort to surgery and that this is better than palliation through electricity. Five years ago my electrical outfit was an elaborate one; to-day I possess no outfit, having given it away to a colleague whose credulity was born as mine died. And yet I would not have you think that I was not as honest in intention in the days when I used electricity as a remedial palliative agent as I am to-day when I discard it. My change in belief has been due to causes of a two-fold nature; in the first place I gradually emerged from a pathology which held sway for years over the minds of the leaders in the profession into the clearer and truer which rules to-day; and, in the second place, I found out practically that there were speedier ways of accomplishing the cure of certain conditions than through electrical treatment, and that in other conditions electricity was an absolute failure on account of the different pathology underlying them than that which I formerly had in mind. In short I had been taught badly, although my teachers were unquestionably honest in belief, and I emerged from under their influence a little later than some of my colleagues, but with the decided advantage over them that I declined to condemn absolutely an agent until after I had tested it and found it wanting. My policy was and still is: Test all things and after the test hold fast to that which proves good.

It appears to me that I can best exemplify the reasons which actuated me in shelving electricity by taking up in turn the affections peculiar to women wherein I formerly contended it was of value and stating succinctly my reasons for preferring the methods of treatment—surgical and non-surgical, to which I resort to-day.

Among the minor affections formerly treated by me by electricity may be noted uterine flexions with stenosis and endometritis (uncomplicated by tubal or ovarian disease). As I look backward it appears to me that I selected electricity in the spirit of protest against other methods then current, such as gradual dilatation and intra-uterine medication. I became satisfied that by means of the negative pole of the battery and low milliamperage I could overcome stenosis more quickly than by graduated dilators, aside from the fact that asepsis was thus better secured than was possible with dilators in routine office work. One method was certainly as rational as the other. The complicating endometritis, furthermore, or this condition aside from stenosis, it was fully as rational to treat by the intra-uterine electrode as by the highly problematical application of drugs carried on cotton-wrapped sticks And, again, asepsis in office work was more thorough. My success was fair as regards the abatement of discharges and relief of dysmenorrhea, but relapses were frequent. I therefore discarded electricity even as I had previously the intra-uterine applicator, and at one sitting under anesthesia, with the dilator and the curette, I accomplished with greater certainty and more speedily the cure of the symptoms due to the stenosis and to the endometritis.

Passing to the inflammatory affections of the uterine adnexa, my reason for advocating their treatment by electricity was simply because I was steeped in the then prevailing doctrine of cellulitis. It seemed as rational to treat cellulitis by electricity (and I still believe it was) as it did by the painting of the vaginal vault with iodin and the insertion of tampons *ad infinitum*, methods which, at the time I am considering, were in high favor, and, indeed, as I speak to-day, I wish to go on record as believing that the one method is as safe, as effective, as rational as the other. With the disappearance of the cellulitic-cobwebs from my eyelids, with the acceptance of what is now the general teaching that, with rare exceptions, cellulitis is a myth and that we are dealing with diseased tubes and ovaries and with peritonitis, I perforce rejected electricity and at one and the same time iodin and tampons. I would still claim that by means of the one or the other, in selected cases, symptomatic cure for a variable period is possible, but anatomical cure never. The careful reader of my writings will find that the latter I never claimed. To-day I am satisfied that there is but one way to secure cure and that this is through surgery. The mortality-rate in my hands in non-selected cases is held at two per cent. Attempts at palliation by electricity or iodin and tampons simply postpone the surgical day and then many a case is in more desperate straits and the mortality-rate inevitably rises.

Passing to the treatment of fibroids by electricity, it was tested by me in about fifty cases, and I may

say that I never saw one disappear except where the menopause entered as a factor. In fully thirty per cent. of the cases I could check the discharges, but only temporarily. The latter effect I found I could secure more speedily and for a longer interval by curettage, and, therefore, from the standpoint of the discharges I found no use for electricity. Be it understood that I never resorted to electropuncture, but that my experience was limited to the Apostoli method. Puncture I always feared on account of the probability of producing local necrosis of the tumor. Fibroid tumors carrying pain as a symptom practical experience soon taught me were unsuitable for any treatment short of the knife because the pain was due (in my experience) to the association of diseased appendages. Thus I have record of a number of instances where complicating pyosalpinx, ovarian abscess, suppurating ovarian cyst (thick-walled) were the causal factors of the pain and not the fibroid, and in some of these cases these factors were only certified to after opening the abdomen. Instances of this type it would be dangerous to treat by electricity, while surgery gives me a mortality-rate in unselected cases of two and one-half per cent., this mortality rate not being traceable to the operation but to the complicating factor making the operation one of urgency, such as suppurating ovarian cyst, peritonitis consecutive to rupture of a pus-sac, etc. Subjects of this type would assuredly die also under any other form of treatment. Patients with uncomplicated uterine fibroids operated on by me have up to date uniformly recovered. Little wonder then that I prefer the certainty of surgery to the uncertainty and protracted delay entailed by electricity.

The last subject I touch upon is ectopic gestation. The first patient I saw treated by electricity went into deep collapse and although, if my memory serves me, the woman recovered, I now realize that this was due more to good luck than to good management. This experience should have been an eye-opener to me but I was easily swerved by the weight of distinguished authority and at this date the leading gynecologists of America favored electricity, being under the subtle influence of this agent to a blinding degree. I treated four to six patients personally by electricity and they all recovered. Of course it was open to doubt if any one case was an instance of ectopic gestation, since the abdomen was never opened for absolute certification. The customary symptomatology was present however. Finally a woman thus treated by me lay in collapse for hours; she had a consecutive hematoma and hematocele. The latter eventually suppurated and was incised per vaginam. The woman recovered. About eighteen months thereafter I again saw this woman in collapse with precedent symptomatology of ectopic. I opened the abdomen at once, found free intraperitoneal hemorrhage from a ruptured tube and the other tube was distended with pus, agglutinated and utterly useless to the woman except as a source of pain and of danger. In short, the tube I had treated electrically for ectopic had become a pyosalpinx and here I had a *demonstratio ad absurdum* of the electrical treatment of ectopic gestation. The woman recovered and so did I from the effects of erroneous belief. At the first opportunity which offered I told the Fellows of the New York Obstetrical Society that I had permanently discarded electricity and why.

Since that date I have operated on fourteen cases of ectopic gestation, inclusive of two cases in collapse from free intraperitoneal hemorrhage. One of my patients died suddenly thirty-six hours after operation and the certified cause of death (without autopsy) was fatty heart. In fully half my series disease of the adnexa of the other side has been a complicating factor. In none of the patients operated on by me would electricity have availed aught unless to expedite a fatal issue. To-day I take the ground that in the presence of a presumptive history of ectopic gestation a clean cut is preferable to and safer than expectancy.

Thus, briefly, have I outlined my views in regard to electricity. Whatever weight they have must be due purely to the fact that they emanate from a man who has had ample experience with the agent and did not condemn it untried. Surely such views should carry greater conviction than hysterical claims in favor of the agent advanced by men who have never operated or but rarely; and, furthermore, I would contend that the position I have assumed in this controversial matter is more befitting the scientific man than that of colleagues who decried electricity without trial and abused those who used it even though by chance it has eventuated that the views they expressed were the sound ones. There is little room for dogmatism in this science of ours where views change almost daily. Electricity had as much warrant for existence in the therapy of gynecology as many another method equally obsolete so far as I am concerned, and yet practised and taught still by a no means insignificant school. Need I state that I refer to tamponade and iodin to the vaginal vault for months and years until you or I operate on the patient and cure her? It is in the spirit of charity toward all that I view these false prophets—and yet earnest workers and honest in belief. I would like all to do as I have attempted: Admit error as soon as convinced.

WAR ARTICLES.

NEWS OF THE WEEK.

IN all probability during the present war disease will be the element of danger rather than Spanish bullets, and the physician will be more in demand than the surgeon; nevertheless, the effect of the small balls used in the modern rifles, projected with almost inconceivable velocity, will prove a most interesting study. The force with which these bullets travel is said to be sufficient to cause one to perforate eight men in succession standing directly behind each other with a space of three feet separating them, the shot being fired from a point twenty feet distant from the first man. In an experiment with one of these modern military rifles recently, the writer, from a distance of five yards, drove a bullet completely through a maple log twelve inches in diameter. In another test, firing at the end of the log, the bullet penetrated to a depth of forty-six inches.

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The great progress of late years in surgery, especially abdominal surgery, will doubtless result in the saving of many lives during the present conflict. Until quite recently, and notably during the Civil War, and all prior wars, an abdominal wound was regarded as inevitably fatal, but now, provided surgical aid can be rendered promptly, as will be the case under nearly all circumstances, the probability of saving life is very great. During the Civil War it was not unusual for two or more days to elapse before even the most dangerously wounded men could receive surgical attention. The awful aftermath of death following the battle of Gettysburg will be recalled with horror, but thanks to the systematic and thorough preparations being made by the Medical and Surgical Departments, and the achievements and advances in the science and art of surgery the proportion of deaths to wounds will be greatly lessened.

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If there is such a thing as an optimistic view of a bullet wound perhaps it will arise from the fact that the bullet of a modern rifle strikes and penetrates its victim with such velocity that there is practically no danger of shreds of cloth being carried into the flesh, and the prospect of infection from this source is thus reduced in very great degree. The Spanish troops are mostly armed with Mauser rifles, which carry with tremendous velocity. Wounds made with these weapons are rarely infected as above described, and unless a bone is struck heal rapidly under favorable conditions.

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The Daughters of the Revolution have taken upon themselves a grand work and one which reaches far beyond the actual care of the soldier in the field. The Government has accepted their offer as embodied in the following resolutions, which were unanimously adopted at the recent meeting of the Society in Washington:

Resolved, That the members of the society be requested to unite in a general effort to succor needy families of men who have gone to the front, and to furnish comforts for soldiers and sailors, whether regular or volunteer. That a large sum of money to be used in emergency and exigency calls of every kind, such as are attendant upon the condition of a nation engaged in warfare. That a war committee, composed of the members of the National Board of Management, with the addition of Mrs. George M. Sternberg and Mrs. Charles L. Alden, be formed. That the treasurer-general, National Society of the Daughters of the American Revolution, be elected treasurer of the war fund, and that the moneys be under authority and direction of a sub committee.

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Plans are well under way to prevent the introduction of yellow fever into this country by troops returning from Cuba. Rigid quarantine regulations will be enforced at every point along the Atlantic and Gulf coasts. Surgeon-General Wyman of the Marine Hospital Service has the supervision of this farsighted and most important matter.

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The number of rejections of candidates for the volunteer service from the militia of the several States because of failure to pass the required physical examinations, has occasioned much and reasonable surprise. We say reasonable surprise, because although it has always been necessary for a man to pass a physical examination before enlisting in the militia it now appears that the physical requirements in time of war are quite different from those in times of peace. Perhaps it does not require a very high physical condition to enable a man to parade for a few hours through a fine street lined with admiring citizens, but if our State militia is intended to be capable of military service in time of need should not the physical standard required be just as high as that necessary for volunteers in the regular army?

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As affording striking evidence of the fitness of college men for the life and duties of a soldier the report of the condition of the Yale men in the State camp at Niantic is interesting. Out of more than sixty undergraduates from Yale who went into camp not one failed to pass the required physical examination.

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The best record made by any company of militia-

men in the matter of physical condition is held by the Second Separate Company, Third Regiment, of Auburn, N. Y. There were but two rejections from the entire company.

REQUISITES FOR AN ARMY CAMP; EXISTING CONDITIONS IN THE VICINITY OF TAMPA.

By H. S. KILBOURNE, M.D.,
MAJOR AND SURGEON, UNITED STATES ARMY, WITH THE 5TH ARMY CORPS AT TAMPA, FLORIDA.

APART from purely military considerations the first three requisites for an encampment are good water, good wood (fuel), and good grass. The first two are closely related to the health and efficiency of the troops, while the first and last involves the well-being of horses, the constant auxillaries of men engaged in war. To these three must be added a fourth of little less importance, *viz.:* a dry, well-drained soil. The vicinity of Tampa meets all these requirements save the third. The water-supply is abundant and pure and fuel is plentiful and readily obtained. The soil on Tampa heights is sandy and dry, with natural surface drainage into the adjoining tidal river (Hillsboro), but grass for the horses and train animals is lacking, a deficiency for which an arid soil and a prolonged period of drouth are sufficient causes.

The above-mentioned sanitary advantages are combined with the military features of a practicable harbor and railway facilities for the movement of troops and supplies. The water source is a large spring situated within the city limits, independent of local rainfall, unfailing, and yielding water having a small percentage of organic matter and of a moderate degree of hardness, and shown by analysis to contain less than ten grains per gallon of dry solids in suspension or solution. The spring is protected by a retaining wall of brick, the water being pumped directly into the mains for distribution to the city and outlying camps by service pipes laid down by the water company according to requirements. A three-inch main or its equivalent in pipes of smaller caliber, will supply sufficient water for the troops and trains of a division for all purposes excepting bathing, facilities for which are found in the tide-water of the river and bay. About two gallons per diem is a minimum allowance per man, eight gallons being allotted to each horse or train animal, but as there is no scarcity of the supply the water is more freely expended. The outflow of the spring is estimated at three million gallons per diem, more than sufficient for the needs of the town consumers and an army corps.

In addition to this natural source of water-supply, there are a number of shallow driven wells scattered in and about the town from which the poorer sort of the citizens obtain a precarious supply derived from the ground and surface waters and which, owing to the absence of sewers and the general use of privy vaults in many localities, are subject to contamination and infection. The sanitary regulations of the camps require that all water excepting that from the spring be boiled for use, preliminary boiling of the authorized supply not being required. Ice produced from distilled water by ice-machines in the city and neighboring towns is procurable at fair rates and finds a ready market among the troops, the hospitals being supplied by expenditure of the hospital funds.

The climatic conditions of Tampa are subtropical with modification due to proximity to the coast. A rainy season, delayed this year, usually begins in May or June, continuing for nearly one-half the year and is followed by a dry season during which a scanty rainfall occurs. The humidity is variable according to the direction of air currents from or toward the sea, ranging between an average percentage of 70 to 90. The month of May was hot and dry and the air in and about the camp exceedingly dusty and irritating to sensitive throats. A meteorological summary for the year 1897 is appended for the information of any of the statistic-

METEOROLOGIC SUMMARY, TAMPA, FLA., FOR THE YEAR ENDING DECEMBER 31, 1897.
(Compiled from record of United States Weather Bureau.)

	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Highest temperature	78	82	88	86	90	94	94	94	90	88	82	82
Lowest temperature	29	39	50	47	55	68	70	70	54	56	50	40
Range, absolute	49	43	38	39	35	26	24	24	36	32	32	42
Precipitation	1.42	5.40	1.44	4.65	.33	8.46	6.23	7.84	10.73	4.78	.63	2.50
Number of clear days	10	10	11	10	22	13	8	12	8	17	16	14
Number of partly cloudy days	14	15	16	13	8	15	19	14	15	11	12	11
Number of cloudy days	7	3	4	7	1	2	4	5	7	3	2	6
Average humidity, per cent	78	86	81	73	70	78	79	82	86	80	81	81

tolerant readers of the MEDICAL NEWS. It will be noted that the summer heats are not extreme but continuous and that the difference between summer and winter maxima is less than 20°.

The City of Tampa, with a population of about 25,000, exhibits for the year 1897 a mortality-rate of 13.30 per 1000.[1] Out of a total of 346 deaths for the year phthisis heads the table with 47 deaths, followed by enteritis and enterocolitis with 25; malarial (?) fever with 16; pneumonia, 14; trismus nascentium, 12; hepatitis, 11, and Bright's disease, 10; typhoid fever is charged with only 6 deaths, all other diseases and injuries having a lower rate. The high death-rate from phthisis is accounted for by the fact that Tampa is a winter-resort for invalid Americans with narrow chests and long purses who come here in the vain hope of recovering from pulmonary tuberculosis in the later destructive stages of that disorder. The city is favored with one hotel of the first-class, heretofore open only to winter visitors, but now having its wide corridors and ample grounds thronged with the gathering military, war correspondents, and the adventurous and curious from all quarters of the world.

MEDICAL AID DURING AN ACTION.

By RAYMOND SPEAR, M.D.,
ASSISTANT SURGEON, UNITED STATES NAVY, ON BOARD FLAGSHIP "NEW YORK."

WHEN "general quarters" is sounded aboard the U. S. S. "New York," the sick-bay is immediately converted into an operating-room, an operating-table is placed in the center, the ordinary instruments for amputating limbs are arranged in trays, and immediately disinfected by steam, aseptic dressings are laid out, and antiseptic solutions prepared for immediate use. In former times during an action the doctors remained in the sick-bay and the wounded were brought to them, but conditions have changed, and now on a ship like the "New York," where there is practically no protected place during an action, this is impossible. The injuries on the old ships were spread out probably over several hours, and the doctors could perform many of the necessary operations during the fight. The engagements between modern ships do not last long, and operations during the period of action is not to be considered on an unprotected ship.

The question which confronts the medical officers is how to save the most lives. It is a known fact that the majority of lives lost during a war are due to the loss of blood. Some authorities estimate the loss of life from hemorrhage alone as seventy-five per cent. of the total. It becomes the duty of the medical officers to take measures to stop all bleeding from wounds. To do this the crew of each gun receives instruction in First Aid to the Wounded by the medical officers. Each gun has its own outfit of rubber tubing and packages of aseptic dressings. The men are instructed how to apply the rubber tubing to the limbs in order to arrest hemorrhage, how to apply aseptic dressings, being especially cautioned against touching wounds, and finally how to support limbs when broken, and how to carry the wounded and where to place them.

Each deck of the "New York" is divided up into several compartments, separated by watertight bulkheads. During an action these bulkheads are closed. Under these conditions the medical officers cannot reach all of the wounded if they are in different compartments; therefore, if a man be injured sufficiently to be disabled, he is attended to by some of his companions. If an extremity be badly injured, a piece of rubber-tubing is applied so as to arrest hemorrhage, an aseptic dressing is applied, the leg is bound to the other one for support, or the arm is bound to the body if fractured, the man is placed in a hammock, and dragged to the best protected place nearby where he will not be in the way, and here he waits for the surgeon. The wounded are placed athwart ships if possible, thus offering the smallest possible target for the shells that come through the ship's side.

The doctors take their stations in the most protected parts of the ship, *viz.*, behind the turrets, and here establish dressing-stations and attend to all the wounded in the immediate vicinity. The surgeons have received orders to expose themselves as little as possible during action, as their real work begins when the fight is over. Each surgeon carries a haversack in which are pieces of rubber-tubing for controlling hemorrhage from the extremities, hemostats, a pocket-case, hypodermic syringe, and solutions of strychnin and morphin ready for hypodermic use, and some first-aid packages. Stationed with each doctor is a nurse, who carries in a knapsack surgical dressings, antiseptic solutions, whisky, etc. When the action is over, the surgeons will take a hasty survey of the wounded and give such attention as is absolutely necessary to each. When the wounded have been attended to, those cases needing immediate operation will be looked after, three operating-tables being established if necessary. The wounded will not be disturbed, but will await the arrival of the hospital ship "Solace," and will then be transferred to her, where they will receive medical attention during their transportation to the hospitals in Key West.

[1] "Annual Statement of Vital Statistics," J. W. Douglas, M.D., 1897.

BAKING OF BREAD IN THE FIELD.

[Special Correspondence of THE MEDICAL NEWS.]

CAMP TAMPA HEIGHTS,
TAMPA, FLA., May, 30, 1898.

IN my last semiweekly medical report to the surgeon of division, through the brigade surgeon, the following note was entered under "remarks": "The bread was sodden and heavy, not sufficiently baked." Before the ink was dry, Brigade Surgeon Ebert and myself investigated the causes of the failure to provide good bread for the regiment, and sought to find means for insuring a wholesome, well-baked loaf under all circumstances hereafter.

Inquiry elicited the fact that the companies of the regiment had arranged to turn in their flour rations to a civilian baker near the camp, and to receive bread from him, in return, pound for pound. The terms were fairer than the bread, for a second regiment was turning in to another bakery 196 pounds of flour, and drawing out therefor only 160 pounds of bread, but the fact of the case is that the bakeries of Tampa have not sufficient capacity to supply the present large demand made upon them by the resident community and by the large increment of floating population incident to the encampment of nearly 5000 troops in the vicinity, consequently to compass as large an output of bread as possible, the proper duration of the baking process is cut short, and the bread loaves are underdone.

But (and this is the gist of the whole matter), if the thriving town of Tampa cannot fully provide us with well-baked bread with all its bakeries in force, how is the army to be provided with this desirable and very necessary article of diet when our troops are landed in Cuba? The answer is simple—the *portable ovens*. We have all heard of them, and can read of them in the "Manual for Army Cooks," published by the War Department, but so accustomed are we to make use of the Dutch oven for small detachments, and so seldom are we thrown on our own resources for large field bakings, that I dare say but few of the regiments are provided with portable field ovens.

Our brigade commissary officer, 1st Lieut. Arthur Johnson, 17th Infantry, finding that his regiment was taxed 100 pounds of bread for the baking of 196 pounds of flour by a civilian baker, purchased and put into operation two small portable field ovens of a capacity of ninety-six loaves for each oven, and sufficient, when operated by two enlisted men as bakers, to furnish a regiment with its bread ration. These ovens were manufactured in Tampa on twenty-four-hour's notice, at a cost of $17.50 each, and were readily "set up" underground in the field. They are provided with removable sheet-iron bottoms, which are taken out before the fire is started and replaced when the dough in pans is introduced. The arched body of each oven is made of sheets of steel in preference to sheet-iron.

It is a common practice when encamped on a clayey soil for troops to construct a bake-oven by baking a clay body; for instance, by placing a barrel filled with combustibles in an excavation, covering with sand and clay, and after combustion has ceased, removing the sand and débris, leaving a clay oven. But in this locality there is no clay, only a deep, sandy soil, and in Cuba, a rich red loam, hence the body of an oven in these localities must be constructed from metal.

So important does this subject appear to medical officers with large bodies of troops in the field, and in the hope that these small portable ovens will be more generally adopted by regiments already mobilized or about to be mobilized, that I venture to quote somewhat in extenso from the manual above referred to: "The body of each oven is made of two pieces of $\frac{1}{16}$ of an inch sheet-iron (sheet steel). These sheets are 5 feet long by 2 feet 6 inches wide, and so curved that, when their upper edges are connected and the lower edges fixed in the ground, they form an arch, the span of which is 3 feet 9 inches, and the rise 1 foot 4 inches. The lower edge of each sheet is bent outward into a flange, so as to secure a firm rest on the ground. On the inside of each sheet are riveted 3 longitudinal bars, 1 inch wide and $\frac{3}{8}$ of an inch thick, and on the outside 5 transverse ribs, $1\frac{1}{4}$ inches wide by $\frac{3}{8}$ of an inch thick. The upper ends of the transverse ribs on one of the sheets are formed into hooks, and those of the other sheet into eyes, by means of which the sheets are securely attached to each other along the ridge of the oven when erected. (The front of the oven is closed by a sheet-iron or steel door with a handle.) When the soil is of clay or of other favorable quality, the rear end of the oven may be closed by the natural earth, but if it is sandy or loose a sheet-iron plate will be required to close it. No chimney is necessary. When set up, the whole, excepting the door, is covered with a mass of earth eight inches in thickness.

"The depth of the earth is named for the reason that a larger quantity would be liable, from its weight, to bend the iron when heated, and a smaller quantity would allow too much heat to escape. An excavation three or four feet in depth should be made a foot or two from the door for the convenience of the baker. Two hours are required for heating the oven at first starting, but for each heating immediately following one hour will be sufficient.

"A small quantity of wood is placed in the oven at

the extreme rear and ignited, the door being kept open to afford a draft and a vent for the smoke. Small quantities of wood should then be added as combustion progresses. In this way the fuel will burn more freely and the oven be heated quicker than if all the fuel necessary for the heating were put in at once. As soon as the oven is at a white heat the ashes should be raked out, the floor swept clean (or the sheet-iron floor put in), and the dough in pans introduced. The time required for each baking is about forty-five minutes.

"The oven can be erected and prepared for use in fifteen minutes, and if kept in constant operation for twenty-four hours can bake sufficient bread for 1000 men. By the use of two of these ovens, therefore, a regiment of 1000 men, if it make a halt of fourteen hours each day, can be supplied with fresh bread daily on the line of march. Ordinary kneading troughs can be made and placed on trestles, or they may be fixed on the ground and trenches excavated near them for the kneaders to stand in."

Compressed yeast may be used under ordinary circumstances, but it should be kept on ice. The rising with this yeast will take from four to six hours. It is more practicable, however, for troops going into Cuba to make use of a dry yeast (yeast foam, yeast powder) that is guaranteed not to deteriorate for three months from time of manufacture. The rising process with the dry yeast will consume eight or ten hours.

A hospital tent should be allowed for a bakery, and two men from the fighting force can well be spared as bakers, for a supply of wholesome bread is not only a comfort to soldiers in the field but virtually strengthens the effective force numerically as well as physiologically through avoidance of dietetic errors.

If these ovens do not turn out sweet, wholesome, and delicious bread it is no fault of their own, as attested by the character of the bread issued from the ovens already in operation in this brigade.

HENRY I. RAYMOND, M.D.,
Captain and Assistant-Surgeon, United States Army.

THE ADVISIBILITY OF A SUMMER CAMPAIGN IN CUBA.[1]

To the Editor of the MEDICAL NEWS.

DEAR SIR: About four weeks ago I wrote an article, which was published in one of the daily papers, in which I took the ground that an immediate invasion of Cuba at that time of the year (May 1st) by a small body of men, 10,000 to 15,000 well-drilled veteran troops, would be followed by no more danger of sickness than an active campaign in the State of Florida under the same conditions; and I also made the statement that I believed that there would be little or no danger from yellow fever to such troops so long as they were kept out in the country and not permitted to enter the cities, making use of the insurgent forces for such purposes. But I must confess, that as matters stand now, I cannot help but take a different view.

The unpreparedness of the military branch of the government has become so apparent, and from all accounts the necessity of a much larger body of troops to invade the island so evident, that I can well understand the hesitation on the part of the Washington authorities to land troops at this season of the year around Havana and Matanzas. In fact, I am about convinced that unless Havana in the meanwhile capitulates from lack of food, no troops will be landed in that province before the month of October or November.

Around Santiago the conditions are different. The country all about is hilly and much healthier, and by utilizing the several thousand insurgents in the neighborhood for the purposes of garrisoning the city after its capitulation, the American troops could be safely encamped all summer under decidedly more advantageous conditions than either at Chickamauga or Tampa.

From the point of view of a Cuban, this pacific blockade, especially if kept up all summer means the practical extermination of all the people in these three provinces, Pinar de Rio, Havana, and Matanzas, and as this war, we are told was undertaken for the very purpose of saving these people, why should American troops not be immediately landed on the island, even if they do run the risk of a high death-rate from climatic conditions, etc.?

On the other hand, as Americans we are justified in reasoning in this manner: We are certainly not prepared for such an undertaking. Our soldiers, mostly men who were only yesterday clerks and mill-hands, are not even supplied with one of the most essential and vital things for a summer campaign in the tropics, and that is suitable clothing. In such an undertaking we know that climate does not influence mortality as much as deficient preparation and lack of organization, therefore, let us take into consideration the lives of 20,000 or 30,000 Americans, as against these unfortunates, who perhaps are already beyond any human aid. This pacific blockade will certainly force Havana to capitulate long before October, and by that time we shall have a thoroughly trained and properly equipped body of troops. There are many sides to this Cuban question, and the position of the men at the head of affairs in Washington, who must decide these questions, is certainly not one to be envied.

The sinking of the "Maine" will bring about the ultimate freedom of Cuba, but she will have many more victims to count than those who went down with her.

Yours very truly,
D. T. LAINE, M.D.

218 SOUTH FIFTEENTH STREET, PHILADELPHIA,
June 6, 1898.

[1] Dr. Lainé's papers on the Cuban question have received wide attention of late and the readers of the MEDICAL NEWS will be interested in the opinion of a Cuban-American of such extensive experience regarding the proposed invasion of Cuba at this time by the United States forces.—ED.

MEDICAL PROGRESS.

Intralaryngeal Hemorrhage. — GEYER (*Münch. Med. Wochenschr.*, April 12, 1898), in speaking of hemorrhage into the larynx, mentions a case in which a hematoma resulted, the appearance of which some time afterward suggested a malignant tumor, and was most puzzling. The difference in appearance between a shriveled hematoma and a malignant growth may be very slight, so that the differential diagnosis may rest in a large measure upon the fact that in the latter trouble infiltration of the cords produces at an early stage some interference with their normal action.

The Direction of the Ciliary Motion in the Uterus.—MANDL (*Münch. Med. Wochenschr.*, April 12, 1898) has demonstrated the truth of the assertion made by some histologists, Hofmeier among them, that the ciliary motion in the uterine canal is from above downward. He examined eleven uteri immediately after extirpation. In seven of them no ciliary motion was detected. In four it was shown to exist, and in all of these the direction was from above downward; that is to say, in the same direction as the motion in the Fallopian tubes. This clinical demonstration clears up this disputed point, for histologists have not been in agreement upon it, Wyder, for example, having claimed that the motion was from below upward.

Purpura an Infectious Disease.—LAPIN (*Med. Moderne*, April 9, 1898) mentions two cases of purpura, one of which ended fatally, and in both of which micrococci were found in the blood. In the fatal case streptococci were present. He states that our present knowledge regarding infectious purpura is as follows:

1. It is not always accompanied by fever, so that one ought never to say that a given case of purpura is non-bacterial until a microscopic examination has been made.
2. Even in septic cases bacteriologic examination ought to be made in the early hours after the appearance of ecchymosis.
3. Individual predisposition exerts a decided influence.
4. Werbol's disease is not a simple purpura confined to hemophiliacs, but is a disease by itself.
5. Purpura frequently enters by the mouth, the pharynx, etc.
6. Predisposing factors other than hemophilia are excesses at table, the use of alcohol, nephritic and hepatic lesions, and such cardiac troubles as cause venous congestion.

Spontaneous Disappearance of Pigmented Keloids.—GOTTHEIL (*Amer Jour. Surg. and Gyn.*, April, 1898) mentions a case of the disappearance of numerous deeply pigmented keloids which had developed in the scars following burns from potash solution. The burns were upon the backs o the hands of a girl aged nineteen, and healed with difficulty. Proud flesh appeared, and was several times burned away, and it was not until four months had elapsed that cicatrization was complete. The following year, without known cause, the scars began in places to increase in size and to grow dark in color, until there were some forty sharply circumscribed elevations of a dark, bluish purple, varying from a quarter of an inch to an inch in diameter. Some of them were treated by electrolysis without marked success, and after six or eight sittings the patient disappeared from view. Eight months later she reappeared, and showed with delight that all the keloid growths had disappeared. As only a half a dozen of the smaller tumors upon one hand had been subjected to electrolysis, the conclusion was inevitable that the involution was spontaneous.

The Use of the Bone-Clamp in Difficult Fractures.—PARKHILL (*Annals of Surgery*, May, 1898) gives numerous illustrations of the advantage of bone-clamps in the treatment of ununited fractures, of fractures with malunion, and of recent fractures with tendency to displacement. The method of application is as follows: Four holes are drilled in the broken bone in such a manner that when the deformity is reduced they shall all be in the same straight line, and in the long axis of the bone. They are an inch or two apart, and about the same distance from the broken ends of the bone. Into each one a slender pin is screwed. These pins are of steel, heavily plated with silver. To their upper ends bent strips of steel are fastened by nuts. These strips overlap, and are held together by a small clamp. The fractured bone is reduced, the ends brought together, and the clamp is tightened. It is then impossible for the ends of the bone to become separated, or for the angle between them to vary. As the pins stand up a considerable distance from the surface of the leg, it is easy to apply a sterilized dressing which will remain for some weeks in an aseptic condition. The claims for this instrument have been well established by its use. They are that it is easily and accurately adjusted, that it prevents longitudinal and lateral motion between the fragments, that the presence of the pins in the bone stimulates the production of osseous tissue, and that no secondary operation is necessitated. Union has resulted in every case in which they have been used, as against fifty-six per cent. of successes which, according to the statistics of Bruns and Gurlt, follow the use of other mechanical appliances.

A Simple and Safe Method of Locating Intestinal Obstruction.—REED (*Jour. Amer. Med. Assoc.*, April 30, 1898) says that the old method of finding collapsed bowel and following it upward in order to locate a point of obstruction in the intestines is often unreliable, for the reason that collapsed bowel may be found above the obstruction as well as below it. When the sense of touch is depended upon to locate the stricture it is advisable to pass the hand first into the left inguinal region in order to exclude hernia and see if the sigmoid flexure is collapsed. If so, the hand is next passed into the right inguinal region, and if the cecum is collapsed the difficulty must be in the small intestine. This may be turned out and the obstruction found, but a simpler and a safer method is what may be properly termed a "color-guide." At the seat of strangulation congestion exists, which deepens and extends further along the bowel the longer the exciting cause

continues. If one loop after another of distended intestine is brought into view at the bottom of the abdominal incision and their appearance carefully noted, a clue will shortly be found to the point of obstruction by following in the direction in which the color grows deeper.

A Retroperitoneal Chyle Cyst.—SARWEY (*Centralb. f. Gynakologie*, April, 1898) removed a retroperitoneal cyst from a girl of eleven years. The cyst, which was very large, had its origin apparently in the pancreas, and as it grew it forced its way through the gastro-colic omentum so that the greater portion of it was in front of the transverse colon. According to the chemic examination of the fluid contents of the cyst, its origin was not in the pancreas but in the lymph vessels. This fluid had the appearance of milk, both macroscopically and microscopically, but was absolutely lacking in pancreatic ferments. The operation showed, also, that the total removal of a cyst in this situation presents by no means insurmountable difficulties. No accident occurred during the operation, and the patient made a speedy recovery.

The Primary Essential Lesion of Typhoid Fever —MALLORY (*Jour. Boston Soc. Med. Sciences*, April, 1898) has made histologic examinations of the intestinal lesions in nineteen cases of typhoid fever in order to determine which lesions are primary and which secondary. As a result of his investigations he denies that the inflammatory theory of the disease is the correct one. This ancient theory, which has recently been revived by Ribbert, supposes an acute inflammation with exudation to occur, followed by enormous proliferation of the endothelial cell of the lymph sinuses (a reparative process), necrosis, and sloughing, and finally repair by granulation. Mallory finds, however, that the essential lesions of typhoid are proliferative, and may very well be compared with those of tuberculosis. In the former they are diffuse, however, while in the latter they are focal. We have to do in typhoid fever with a mild toxic agent, which in part is absorbed from the intestinal tract, and in part is produced within the body in the various organs and in the blood. The intestinal lesions depend on absorption mainly through the lymphatic apparatus, but in part through the capillaries. The toxin is diffusible, as is shown by the extension of the lesions in the submucosa, serosa, and muscular coats to a varying distance outside of the path of absorption. The lesions in the mesenteric lymph nodes depends on absorption through the lymphatics.

The lesions in the rest of the body depend primarily on the toxin in the general circulation. These lesions are not peculiar to typhoid fever except in rotation, sequence, and degree.

THERAPEUTIC NOTES.

Quinin Instead of Ergot in Midwifery.—MACKNESS (*Edinburgh Medical Journal*, May, 1898) thinks that ergot is often administered in labor when better results might be obtained from the use of quinin. All preparations of ergot are unreliable. The liquid preparations are nauseating, and ergotin keeps badly and is not suited for hypodermic use. Moreover, ergot causes tetanic contraction of the uterine muscles, and while it sometimes produces spasms of uterine contraction there is not complete relaxation between the pains. This tetanic contraction is dangerous to the mother and even more so to the child, so that if delivery is not accomplished within half an hour after the administration of the drug, other means have to be resorted to.

The advantages of quinin are numerous. It keeps indefinitely and can be administered in tasteless form. It has no tendency to produce vomiting. Its action is certain and is manifest within twenty minutes after its administration. It increases the strength of the labor pains while relaxation occurs in the intervals just as in normal labor. This fact can be verified by any one who chooses to keep his hand upon the abdominal wall after the drug has been administered. It is therefore of especial use in cases where inertia is caused by the general exhaustion of the patient or by actual lack of power in the uterine muscles themselves. If delay is caused by obstruction in the passages no drug, of course, can avail. In normally formed primiparæ where slow dilatation of the passages causes exhaustion of the uterine muscles, quinin will often stimulate them anew so that delivery can be accomplished without instrumental interference. Two four-grain pills of the sulphate are given and if the pains do not increase sufficiently another is given in an hour, and yet another an hour later. The third dose is, however, rarely required. Toxic symptoms need not be feared. Ergot should be administered after labor to control hemorrhage. It is useful in threatened abortion where hemorrhage occurs without pains, the os uteri being closed. Given in small doses it is beneficial in subinvolution of the uterus.

Duration of Life of Thiersch Grafts. — LJUNGGREN (*Deut. Zeitschr, f. Chir.*, vol. lxvii. p. 608), by the microscopical examination of Thiersch grafts which had been kept for three months in sterile ascitic fluid, found that the epithelial cells were well preserved, and their nuclei took stain well. The epithelial layer was for the most part separated from the underlying fibrous and fat tissue, but in grafts which had been kept for several weeks these structures were still firmly united. To determine whether grafts of such an age were really composed of living cells a number of them which had been kept for varying periods of time were planted upon fresh and ulcerated surfaces, every precaution being taken to insure the accuracy of subsequent observation, so that a growth from the edge of the wound, for instance, should not be mistaken for an increase in size of the grafts. The oldest grafts which the writer was able to make adhere and grow had been kept for a month at the room temperature, the ascitic fluid not being changed. This is certainly a remarkable result, and the question at once presents itself whether at a lower temperature, or with some nutrient fluid, or by changing the fluid from time to time, it might not be possible for a still longer time to preserve alive epithelial grafts. Ljunggren, in fact, suggests that it may be found practicable for surgeons to keep on hand among their surgical supplies a number of grafts for future use.

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THE RED CROSS.

THE present time would seem to be opportune for saying a few words concerning the Red Cross Society, which is now attracting such widespread attention. The fact that our Government was rather late in officially recognizing it, having entered the compact in 1882, may explain why so few fully comprehend the origin and functions of the society, or the Geneva Society of Public Utility, as it is properly called. The Red Cross is an organization which owes its existence to the initiative of Henri Dunant, who, after witnessing the terrible and preventable suffering of the wounded at the battle of Solferino, June 24, 1859, addressed a petition to the Swiss Government that it should foster an international conference whose object should be to devise a plan for the amelioration of the suffering of the sick and wounded in war. As a result of M. Dunant's agitation the Swiss Government appointed a committee in February, 1863, which invited the nations of the world to send delegates to an international conference in Geneva during October of the same year for the formulation of such a plan. This conference adopted regulations for the establishment and government of civil organizations in each country to supplement the work of the medical department of the army and navy on the battle-fields and in hospitals, and for the international legal existence of such organizations.

The conference having laid the foundation for the international work of relief, the Swiss Government then invited the nations to send delegates who would convene in congress endowed with authority to ratify its action. This convention, held in August, 1864, resulted in the adoption of nine articles of international treaty known as the Convention of Geneva. The pith of the articles is that all sick or wounded persons shall in time of war be regarded as neutral and that the Red Cross shall care for the enemy's disabled as for their own. A sick or wounded soldier is a Red Cross subject, it matters not to which army he may belong or into what hands he may fall. The red cross upon a white field was agreed upon as the distinctive badge of neutrality. This insignia must be displayed at all times, and the badge or brassard must bear the visé of the duly authorized military or naval officer under whom the member of the Red Cross serves, as a guarantee of its right of recognition. In every country which signed the Red Cross Treaty originally, or which has since signed it, there is a civil Red Cross organization whose duty it is to cooperate in time of war with the sanitary services of the army and navy when called upon. The civil arm of the Red Cross can extend unmolested through the lines of battle to reach the suffering, it matters not who they are, or where they are. Members of the Civil Red Cross Corps whose services are accepted by the military authorities become as subservient to the medical department of the army as duly enlisted members of the army. Their badge gives them the protection of neutrality.

Many are unable to understand why the ambulance-ship, "Solace," which was equipped and is supported by the United States Government, and which is under the direction of the Medical Department of the Navy, is flying the Red Cross alongside the Stars and Stripes, and they naturally ask if the former flag gives the protection of neutrality despite the fact that the ship is a part of our armamentarium of warfare. If it does, many interesting questions arise, some of which it would seem quite impossible to answer. Sailing under the Red Cross flag, the "Solace"

is bound to give succor to wounded and ailing friend and foe alike, and she forfeits her right to be considered neutral by favoring the one or the other. If an American ship and a Spanish ship were put *hors de combat* during an engagement and both stood in most urgent need of an ambulance ship, to which would the "Solace" turn her attention? It is beyond the belief of the most divinely generous and altruistic that the enemy's wounded should be cared for before those of our own flesh and blood; and still it would seem to be incumbent for the ship to do this if she happened to be nearer that of the enemy than her own.

Another question that suggests itself is, Why should our Government fit out ships which may dispense their aid entirely to the sick and wounded enemy? Spain was one of the first to see the eternal fitness of the Red Cross, but she has not despatched a ship flying the red cross with Cevera's fleet, nor do we hear of any such making ready to accompany the Cadiz fleet. It would seem to us that ships flying the Red Cross should be those fitted out with the funds that flow into the exchequers of that Society, and that the Government of this country should expend its moneys for the relief of the sick and wounded at sea only upon ships that will care for her own soldiers and sailors.

THE VACCINE VIRUS FURNISHED BY THE NEW YORK CITY DEPARTMENT OF HEALTH.

NEW YORK CITY does not have a system of compulsory vaccination, yet the fact that no child is allowed to enter a public school until it has been successfully vaccinated makes it probable that more than ninety per cent. of all children within the city limits are vaccinated before the age of eight years. Since the majority of these children are vaccinated with virus obtained from the Laboratory of the Department of Health, either by inspectors appointed for the purpose, or by private physicians, who obtain it from the various drug-stores, it is pertinent to consider whether the department is furnishing to the profession and community a safe and reliable virus.

The physician should have confidence that the vaccination will not only be successful but will pursue a regular course without dangerous complications, and he should be able to give this assurance to the family of his patient. It may therefore be of interest to call attention to the work which is being done by the Department of Health in regard to these points. In the first place it may be stated that only bovine virus is employed. The calves are carefully selected and after the virus is collected from a calf, the animal is killed and a thorough examination of all the organs made. A sample of the collected virus is then given to the bacteriologist, who makes tests upon culture-media for the presence of extraneous germs. A second sample is sent to an inspector, who is required to vaccinate five children, making three scarifications on each.

In case the calf shows disease of any organ or the bacteriologist discovers organisms which would render the virus dangerous, or if fifteen perfect vesicles are not obtained from the clinical test all of the virus collected is destroyed. In other words, unless the vaccine matter is clearly proved to be safe and one-hundred-per-cent. efficient it is not sent out of the laboratory for distribution. Should it respond to all these tests it is put up in sealed capillary tubes, each containing sufficient for one vaccination, or in small vials of a capacity sufficient for ten or fifty vaccinations.

The results of this careful work are shown in the statistics of the Health Board for 1897, when over 20,000 primary vaccinations were performed by the inspectors with a percentage of success greater than 99. All authorities on this subject agree that in a very small percentage of cases considerable inflammation may arise from a skilfully performed vaccination with sterile virus; but in the vast majority of cases this results from an improper method of vaccinating or from a mixed infection due to rupture of the vesicle.

The virus furnished by the Department of Health is very concentrated and only a small quantity is necessary for a successful "take." Caution is also to be observed in making the scarification, which should be small (not more than one-eighth of an inch in diameter) and exceedingly shallow, so as to remove only the outer layers of skin, scarcely drawing blood. The instrument recommended for this purpose is an ordinary sewing-needle, which causes very little pain and after being used can be thrown away. The virus should be taken upon the broad end of a sterile, smooth, wooden toothpick and

gently but thoroughly rubbed into the scarified area.

Various methods of protection have been devised, but all are open to the objection that they are liable to crush and macerate the vesicle. As the result of experience the department has found that a loose sleeve lined with a piece of soft linen affords the best protection. If this method is carefully followed it may safely be said that very few failures or serious complications will occur.

THE BRITISH PHARMACOPŒIA OF 1898.

THE new volume is printed but is not quite ready for public distribution. It follows quite closely the edition of 1885 as to arrangement and size. The accessions to the list are seventy-seven in number, while the omissions are one hundred and eighty-three. Among the latter are several of the older decoctions, infusions, tinctures, and unguents which are at the present time little used. Among the additions we find that comparatively few of the newer preparations find place, the principal ones being salol, salicylate of bismuth, hyoscin hydrobromid, hyoscyamin sulphate, terebene, naphthol, and two preparations of thyroid. Most of the other additions consist of pharmaceutical preparations, and of these a series of concentrated solutions are perhaps those which will be most acceptable to the medical profession, inasmuch as this innovation appears to constitute an attempt to keep pace with the dispensing practice of late years and to establish a standard of purity for many preparations which have hitherto been much employed with no certainty of their composition. Considering the small number of additions it is somewhat curious to find that there are no less than seven new syrups, most of which appear to be intended to render medicines more palatable.

Some of the alterations affect drugs which are in every-day use; at the head of the list stands aqua chloroformi, which is so extensively used as a vehicle. This preparation in the new volume is reduced to one-half of its former strength, so that it no longer affords an indication of the degree of solubility. The alcoholic extract of belladonna now contains one-third the proportion of the alkaloids present in average samples of the former extract and is prepared from the new liquid extract, instead of directly from the root. The extract of nux vomica now contains five per cent. of strychnin, which is two-thirds of the alkaloidal strength of the extract of nux vomica of the edition of 1885, and this also is prepared from a liquid extract, instead of being obtained as formerly from the seeds. In this case the dose is the same as before, but the dose of the alcoholic extract of belladonna has been increased. The phosphorus pill of the last edition contained about one grain in ninety of phosphorus of the mass. The new pill is made so that it may contain two per cent. of phosphorus and the whole method of preparation has been completely altered, carbon bisulphid being now employed as a solvent. The strength of the morphin suppositories has been reduced, each containing now a quarter instead of half a grain.

ECHOES AND NEWS.

Vaccination in the Orient.—In Japan the law not only makes vaccination compulsory but directs that revaccination be practised every five years.

Another Hospital Ship.—The "John Englis" of the Maine Steamship Company has been purchased by the Government to be used as a hospital ship for the army.

Holidays in the University of Paris.—The future doctors, lawyers, and politicians of France devote but 149 days out of 365 to their education, the remaining 216 being holidays.

First Use of the Term "Microbe."—The word "microbe" was introduced to the scientific world by M. Sedillot in a communication presented to the Académie des Science of Paris, in 1878.

Foreign Practitioners in Italy.—Foreign medical men are permitted to practise among people of their own nationality in Italy, but are forbidden under pain of prosecution and fine to give first aid to an Italian in a street accident.

Degree for Medicine-Mixers.—Following the lead of the Philadelphia College of Pharmacy the Paris Society of Pharmacy has decided to grant the degree of "Doctor of Pharmacy" to those who excel in the mixing of medicine.

Telephone Service and London Physicians.—It is said that in London not more than twenty or thirty physicians have telephones in their offices. This seems strange to the American physician who finds the telephone service indispensable.

Society of Infantile Medicine and Surgery.—At a recent meeting of the physicians and surgeons of the various hospitals for children in Paris, held under the presidency of M. Cadet de Gassicourt, it was decided to form a society with the above name.

A Phonetic Reporter.—The *Times* (London), in speaking of the condition of Mr. Gladstone shortly before his

death, makes his physician say that his patient had "change-stroke in his breathing." Presumably the illustrious patient was suffering from Cheyne-Stokes' respiration.

New University Degree.—According to the *Medical Press and Circular* (London) a new degree has been created by the Council of the University of Paris, to-wit, that of "Doctor of the University of Paris." It will be granted to students of science or of medicine on conditions similar to those required for the German Ph.D., namely, the preparation of a thesis embodying original research.

Corns and a Learned Judge.—According to the ruling of a German law court "corns on the feet are not a disease" and, consequently, remedies for this condition cannot be considered as coming under the head of medical treatment. The contemporary which makes this statement expresses the hope that the millions of mortals who are afflicted with corns will find comfort in the decision of this learned judge.

Felons May Not Practise Medicine.—The Supreme Court of the State of New York recently upheld the constitutionality of the law which forbids a physician who has been convicted of a felony to practise his profession after his liberation from prison. An appeal had been taken on the ground that the law was unjust and unconstitutional in that it added a new punishment to the sentence already served.

L'Amende Honorable.—The resident medical officer of the West Ham Infirmary, Leytonstone, England, who was inexcusably attacked by the *Twentieth Century Press* in an article headed "How They Treat Poor Children in the Workhouse," has had the satisfaction of forcing the editors to publish an apology in three newspapers, to bear all costs of the suit, and to pay over to the Infirmary the sum of ten pounds and ten shillings.

Sudden Resignations.—There is good authority for stating that Professors Austin Flint, Frederic S. Dennis, and Samuel Alexander have resigned their respective chairs in the faculty of the Bellevue Hospital Medical College. It is inferred from this action that these gentlemen will not become members of the faculty of the combination of Bellevue College with the Medical Department of the New York University. It would seem that they do not find the prospects in the new school as inviting as its friends have anticipated.

An Ancient Pocket Code of Ethics for Surgeons.—The Master in Chirurgie, Guy de Chauliac, who flourished between 1300 and 1370 was the author of the first surgical treatise of importance after the Middle Ages, a work that had full sway for two centuries. He grouped together a few precepts for his own and his pupils' guidance, which might be taken as the nucleus of a code for surgeons of the present day. "In dangers cautious. Be bold when sure. Friendly with fellow-workers. Not greedy of gain. Constant in duty."

Gift to the Kings County Medical Society.—The late Dr. Cornelius Olcott of Brooklyn, through his heirs, has given to that society copies in oil of the three best known medical paintings in Europe; namely, first, "The Lesson in Anatomy," the Rembrandt masterpiece at The Hague; second, "Harvey Demonstrating the Circulation before Charles I.," and third, "The Anatomist," by Gabriel Max. These paintaings will be cared for privately until the proposed new building for the society shall have been erected.

Anthrax Contracted in a London Post-Office.—A case of anthrax contracted under peculiar circumstances is reported in a recent number of the *British Medical Journal.* The patient was a man employed in the Parcels Post-Office of the London post-office whose duty it was to repair wooden boxes and baskets broken in transit. Strips of leather cut from untanned hides were used for this purpose. The man had a pimple on his neck and had scratched it, and anthrax appeared as a result of handling raw hides. It was stated that nine years ago a case of blood poisoning occurred in the same department from a similar cause.

Medical Education Gratis.—At the Faculty of Medicine in Cairo, Egypt, a man may study medicine at the expense of the government. There are no fees for the examinations, or any other expenses, and each student is allowed $10 a month for pocket money. Furthermore, there are restaurants near the college buildings where students may take their meals at the expense of the government. The reason for this strange state of affairs is stated by the *Lyon Médical* to be due to the fact that all the Egyptian students deserted the college when Englishmen took possession of it, and it then became necessary to replace them at any cost.

Return of the "Solace" from Key West.—The United States Hospital Ship "Solace" returned to New York on June 5th from Key West, bringing fifty-four men belonging to the various warships, who have been invalided either on account of illness or from wounds received in the bombardments, in which the vessels have recently been engaged. Four of the men were suffering from tuberculosis. Four surgeons, eight trained nurses, and three apothecaries looked after the welfare of the sick and wounded during the trip. Ambulances from the Naval Hospital were awaiting the arrival of the vessel to transfer the patients. The men have improved very rapidly since leaving the enervating climate of Key West.

Indictment against Dr. Cleaveland Dismissed.—It is a pleasure to announce that Dr. Turnbull W. Cleaveland, a Fellow of the New York Academy of Medicine and of the New York Obstetrical Society, and a highly esteemed member of the profession, who for nearly three months has been under bail on a criminal charge, has been honorably discharged by Judge Cowing in Part II. of the Court of General Sessions. The indictment was found in March by two members of the Grand Jury on the uncontradicted statement of the defendant, James L. Carhart, a theatrical manager, who alleged that the death of his infant daughter was due to the criminal negligence of Dr. Cleaveland. Previous to the criminal charge a civil suit for

damages had been unsuccessfully brought against the physician by the parents of the child.

Electric Anesthesia.—In a brief communication to *Science* Professor E. W. Scripture of Yale University states "that while making some experiments on the sensations derived from sinusoidal currents he noticed that anesthesia of the tissues resulted from currents of high frequency, the condition lasting for some time after the removal of the electrodes. While in this condition the fingers could be pricked with a pin without any resulting sensation except that of dull contact. Sensitiveness to cold was also removed. The investigation has been continued and has shown the possibility of employing a sinusoidal current of high frequency as an anesthetic." The observations of Professor Scripture, which evidently led him to more than suspect that in especially adapted electric currents there exists a local anesthetic power of practical value, should excite the interests of surgeons, and we are glad to record his promise to publish at an early day the details necessary for the application of his discovery.

Unexpected Demands.—The unpreparedness of our nation to go immediately to war is just now becoming painfully manifest on every hand and carries a telling rebuke for those critical jingoes who have liberally abused the conservatism of our central authorities. The appeal of the American Bible Society through its Treasurer, Mr. William Foulke of the Bible House, New York City, for contributions required for its work among our soldiers only presents another phase of the situation. To supply the Army and Navy of the United States now expanded to a war footing, very large demands are being made on the American Bible Society for pocket testaments. Tens of thousands of copies have been called for by the chaplains of regiments, Young Men's Christian Association officers, and other responsible parties who are at work in the camps all over the country and at the front. Care is used to insure the wisest distribution accompanied by a friendly word with each man. Deprived as they are of reading matter, the soldiers gladly accept the books, and will treasure them as a souvenir of the war.

An Eastern Branch of the Battle Creek Sanitarium.—New York City is to have a branch of the famous Battle Creek Sanitarium. Dr. J. H. Kellog, the well-known Superintendent at Battle Creek, has engaged the Park Hotel, at Prohibition Park, Staten Island, for this purpose, and he and his helpers open the doors of the hotel for guests this week. It is not generally known that the Battle Creek Sanitarium is a huge benevolent enterprise of the Seventh-Day Adventists, and that this sanitarium has now fifteen branches under its charge in various countries, almost encircling the globe. None of the profits from these sanitariums go to individuals, but all are turned into what is known as the Medical Missionary Work. It is a cardinal principle of these Adventists that the human body, as well as the soul, is sacred to God, and that it should be religiously cared for. A more delightful and profitable place to spend a summer vacation it would be difficult to find than one of these sanitariums or health-resorts.

CORRESPONDENCE.

OUR PHILADELPHIA LETTER.

[From Our Special Correspondent.]

RESULTS OF THE SCHUYLKILL INVESTIGATION—PHYSICIANS WHO WILL REPRESENT PHILADELPHIA AT THE AMERICAN MEDICAL ASSOCIATION CONVENTION—PATHOLOGICAL SOCIETY—RED CROSS SOCIETY IN PHILADELPHIA—THE EVANS' WILL CONTEST—ANOTHER INSTANCE OF INSUFFICIENT MARRIAGE LAWS—HEALTH-BOARD STATISTICS.

PHILADELPHIA, June 8, 1898.

THE local health authorities completed their investigation of the pollution of the Schuylkill River on last Wednesday. This river, furnishing as it does the water-supply of this city, has long been a menace to health and the investigation promises to reveal some facts which will astound the authorities. A trip was made as far as Reading, photographs and samples of water being procured at various points along the course, and while the report will not be made public until the views are developed and the samples analyzed, it has become public property that causes exist which may at any time give rise to an epidemic of fever or dysentery.

The secretary of the State Board of Health, Dr. Benjamin Lee, who was a member of the investigating party, said that the Commission hopes to produce such evidence of impure water that legislative action will be taken to protect not only the Schuylkill but all streams of the State. Such action has been taken by New York and many other States and in time it is hoped all towns will arrange some satisfactory method of disposing of sewage or at least of rendering it innocuous.

Camden, across the Delaware, is also in the depths, for after suffering for years from an insufficient and unwholesome supply of water the city contracted for an artesian well capable of furnishing 2,000,000 gallons of water every twenty-four hours. After relishing this welcome change for ten days the residents have been compelled to return to the old source of supply, for the contractor, claiming to have been unfairly treated by the city officials, cut the new one off. In all probability the matter will be settled in the courts next week.

Philadelphia will be well represented at the convention of the American Medical association in Denver, about two hundred physicians having gone. Among the number were Drs. J. H. Musser, Hobart A. Hare, W. W. Keen, Crozier Griffith, B. Alexander Randall, W. B. Atkinson, Edward Jackson, Judson Daland, L. F. Flick, George M. Gould, J. V. Shoemaker, James Tyson, and J. C. Wilson.

At the National Education Association Convention to be held in Washington, July 7-12, Dr. D. H. Bergy of the University of Pennsylvania is to read a paper on "Heating, Lighting, Ventilation, and Sanitary Arrangements of School Buildings."

Among the specimens presented at the last meeting of the Pathological Society were a spleen weighing 5600 grams (nearly 15 pounds), and a liver weighing 6300 grams (nearly 17 pounds). These were shown by Dr.

H. A. Hare, who reported the case, one of splenomedullary leukemia.

The local Red Cross Society in its desire to interest and receive support from the public, recently conceived the idea of holding a mass-meeting. Many prominent men were to take part and it was hoped to raise sufficient money to maintain an ambulance and field-hospital at the front, but the idea did not receive sufficient encouragement and has therefore been abandoned, much to the regret of many who are interested.

At a recent examination of applicants for the position of Assistant Surgeon in the Navy Dr. T. L. Rhoads, a graduate in 1893 of Jefferson, and lately pathologist to the Surgical Department of Jefferson Hospital, scored a percentage of 841 points, beating the previous record of 826 points.

The first hearing in the will case of the celebrated Dr. Evans, the American dentist who accumulated an immense fortune in Paris, was held on Friday, Clara Davis, a niece, objecting to the probating of the will. The city will defend the will inasmuch as the municipality is to receive $8,000,000 if the will is proved. Under its terms this sum is left in trust for the founding of "The Thomas W. Evans' Museum and Dental institute." In the event of success no doubt the interests of the city will be incorporated in one of the existing dental schools, of which there is already an overabundance.

Samuel Henderson, the fifteen-year-old murderer, was sentenced this week to twenty-years' imprisonment. The case, which was detailed in the MEDICAL NEWS of April 9th last, attracted much attention because of the expert testimony and the endeavor of the defense to prove insanity. A similar case having occurred during the present week attention is brought to the necessity for legislation prohibiting the marriage of defectives; in the Henderson family there is a history of a homicidal heredity.

The total number of deaths reported at the Health Bureau for the week ending June 4th was 406, of which 120 occurred in children under five years of age. There were 155 new cases of contagious diseases reported as follows: Diphtheria, 57, with 15 deaths; scarlet fever, 47, with 2 deaths; typhoid fever, 51, with 7 deaths. It is interesting to note that the mortality from typhoid in Philadelphia has been decreasing each year for the past decade. In 1888 it was 21 per cent. of the number of cases reported and a steady decrease has brought it down to 13 plus per cent. for 1897. A lower rate is probable this year. A similar fall in the number of cases has occurred also, though it is not so marked. From 1887 to 1892 the average number was from 3400 to 3700, and from 1891 to 1897 from 2300 to 2600.

Liniment for Myalgia.—

℞ Aq. ammoniæ . . . . . ℥ iiss
Ext. hyoscyami } aa . . . . ℥ ss
Ext. opii }
Ol. thymi . . . . . gtt. v
Ol. camphorat. . . . . ℥ iii.
M. Sig. Rub painful parts morning and evening.

OUR FOREIGN LETTER.

[From our Special Correspondent.]

A GREAT SURGEON'S VIEWS AS TO MEDICINE AND SURGERY IN WAR—THE IMPORTANCE OF THE CARE OF THE SICK AS WELL AS THE WOUNDED—THE DISINCLINATION BILLROTH NOTED AMONG PHYSICIANS REGARDING THE CARE OF THE SICK—VENESECTION AND THE USE OF LEECHES IN CHILDREN—A NEW HOSPITAL FOR BERLIN.

BERLIN, May 28, 1898.

As everything in America breathes a martial air and war and its affairs occupy all attention an expression of expert opinion as to the German medical arrangements during the Franco-Prussian war of 1870-'71 may not be untimely. Most of the medical men who volunteer for actual service go with the idea, of course, of having to treat wounded soldiers, firmly persuaded that they are to have extensive practice in surgery, especially the surgery of gunshot wounds and with very little prospect that most of their duty will be to treat purely medical cases. Yet in the campaign about to be inaugurated in Cuba, their aid as medical men will, beyond doubt, be much more often invoked than their skill as surgeons.

Billroth, in a series of surgical letters written from the war hospitals of Weissenburg and Mannheim in 1870, expressed himself very forcibly on this subject. (The letters contain other interesting observations of the great surgeon that may be of interest to military medical men at this time.—*Briefe aus den Kriegslazaretten in W. and M.* Berlin, 1872, August Hirschwald.)

"The thanks of the poor jaded sick soldiers," says Billroth, "for the care taken of them are not less hearty than those of the wounded. The disinclination among the physicians to treat sick *unwounded* soldiers was formally epidemic, though most of them were certainly better prepared to treat medical than surgical cases. At the beginning of the campaign the number of wounded was naturally in excess of that of the sick, but after the first month, despite the fact that this war has been especially favorable to the health of the troops, the number of sick and wounded was equalized. After two months the number of sick was always greater than that of the wounded and remained so.

"This fact, which has been noted in all wars, was not sufficiently taken into account. The number of lazarettos in the immediate neighborhood of the scene of operations seems to have been too small, otherwise they would not have had to materially reduce the number of men in the ranks by sending to distant hospitals for treatment men afflicted with but slight diarrheas, who might have gone back to service again in a couple of days. It seems to me that in this I can see the absence of a sure, level-headed, experienced clinician, who at the same time understands military matters, as the guiding-head of each military medical department.

"It is certain that men with light cases of dysentery transported for nights and days on the scarcely even straw-covered floors of freight-cars, often without medical attendance, were frequently made much worse, though it is certain too that the newspaper reports as to inadequate

and crude hospital and transport conditions were greatly exaggerated.

"Had I time personally," the war was then practically over, "after the transfer of the lazaretto from Mannheim, I should have traveled as far as possible into France itself and would have devoted my attention in conjunction with the Red Cross Society and the various aid organizations to the care of the sick.

"What I missed in the field hospitals and military medical department generally, was the presence of young, strong medical men, whose youth and health fitted them for the arduous duties, and whose experience in internal medicine made them eminently suitable for that thoroughgoing care of the sick that was so much needed. They would have reaped, besides the consciousness of duty to Fatherland in efforts that were of the most humane and practical character, a rich reward in the most varied experience in internal medicine. I saw practically none such. I hope that I shall meet them in the next campaign. The authority which a distinguished well-known surgeon or physician brings into a lazaretto is enough not only to assure its proper scientific conduct, but also assures the proper subordination in various ranks of the physicians in charge, without which I need not say that things will not be carried on properly in such large institutions."

These words of the greatest of modern surgeons as to the necessity for physicians in time of war cannot but be precious at a time like this. Most of the medical volunteers for the war look, as we have said, for surgical practice. Billroth's experience in the war in which sickness played the least rôle of any war in history is important to consider. The disinclination to attend the sick must not be found among American physicians, though of course the privilege of tending the brave fellows who are wounded in action will be an enviable one. The condition of things in Cuba is such that sickness will inevitably be one of the most serious factors to deal with during the campaign.

The eyes of Europe are turned with deepest interest to watch how the well-known inventive and organizing genius of Americans will deal with the problems presented in this war. The medical army organization during our last war, from '60 to '65, was the source of many a suggestion that was eagerly adopted over here and the invention of the barrack or pavilion-hospital plan revolutionized military medicine. Patriotic medical men will not be wanting now, any more than thirty years ago, and will be as satisfied to take obscure, hard-working positions in the care of the sick, because their duty and the really greatest benefit to the army and the country in the care of soldiers is thus secured. Out of it all will come, we feel sure, some organization of the military medical service that will not leave it any longer liable to the objections which the great surgeon Billroth found some twenty years ago. This much one can confidently say medical Europe expects to see result from practical American methods.

The extent to which the reaction in favor of venesection as a therapeutic measure has set in may be gathered from the fact that at the last meeting of the Berlin Medical Society Professor Baginsky, on the strength of recent personal experience with it, recommends it even for children. Up to this it has always been considered, at least since venesection went out of fashion at the beginning of the century, that for children, who bear loss of blood very badly, it was an absolutely unsuitable measure. In severe cases of convulsions in children Baginsky has found it most efficient. He has felt himself practically forced into its use by finding at the autopsy of eclamptic children in several instances intense cerebral hyperemia. Actual venesection he reserves for extremely bad cases. In ordinary cases of children's convulsions he uses leeches—one leech for each year of the child's age. He applies them over the mastoid so as to be able to easily control the bleeding afterward by pressure. He considers it imprudent to allow any after-bleeding. Where the leeching is not followed by immediate relief he opens a vein and takes away 60 to 100 c.c. (2½ to 3½ ounces) of blood.

I said some time ago, in describing the improvements that were to be made in the near future in the Charité Hospital here, that Berlin was alive to the fact that to retain her place as the great medical center advance and improvement in modern clinical facilities must be the watchwords. Another evidence of the determination that the city shall retain its place at the head of medical education is the announcement that a new hospital is about to be erected in the extreme northern part of the city. The plans have already been adopted and give some idea of how extensive the new institution is to be. It is to cost 13,200,000 marks, more than three and one-fourth millions of dollars. Its grounds will contain over 116 acres, more than sixty-six of which will be covered by buildings. Professor Koch's department, the Institute for Infectious Diseases, which at present occupies an extremely unsuitable place in connection with the Charité in the heart of a populous part of the city is to have its quarters transferred to the new hospital, which is to be finished in 1903. No expense is to be spared to make it eminently suitable at once for the care or patients and the investigation of disease. Its hospital wards are to be on the pavilion plan, though the administration and some of the other buildings not connected with the hospital proper are to be ambitious architectual structures.

TRANSACTIONS OF FOREIGN SOCIETIES.

London.

PRECIPITATED ALBUMOSE IN THE URINE—INTRAPLEURAL TENSION—CENTRAL GALVANIZATION IN CARDIAC AND OTHER NEUROSES—TREATMENT OF TUBERCULOUS DISEASE OF THE BLADDER—A CASE OF COMPLETE HEPATOPTOSIS—RENAL CALCULUS DISCOVERED BY THE ROENTGEN-RAY—TRANSPLANTATION OF TENDON TO CORRECT THE DEFORMITIES OF PARALYSIS.

AT the Royal Medical and Chirurgical Society, April 26th, BRADSHAW read a paper on "A Case of Albumose-Uria, in Which the Albumose Was Spontaneously Precipitated." The patient, an old man, who had enjoyed good health, passed two or three times a week a milky urine which deposited a copious white sediment, giving the re-

actions of a proteid. At other times the clear urine contained a proteid substance in solution. Cases have been reported in which albumose in solution has existed in the urine, but this is the first case on record in which it has been passed in a precipitated form. In the cases recorded there has usually been some disease of bone, and this patient also showed a certain degree of kyphosis and rigidity of the lower vertebræ.

MARTIN reported a case in which the urine contained precipitated-albumose. The patient was a woman from whom an ordinary multilocular ovarian tumor had been removed. There was no evidenee of bone disease but there was chronic renal inflammation and hypertrophy of the heart. The substance met with in the urine in such cases is usually spoken of as hetero-albumose, but it differs from true peptic hetero-albumose in not being dialysable. It differs from deutro-albumose in being redissolved after coagulation in a 0.2-per-cent. solution of caustic soda. Further observations are necessary to show whether the body more closely resembles proto-albumose or peptone. In cases associated with multiple new growths, rapid cell degeneration leads to the formation of proteids which cannot be used within the body and are excreted.

DICKINSON said he had met with both proto- and deutro-albumose in the urine of patients suffering from pneumonia, in some cases as much as one per cent. The cases were always marked by severe symptoms, depression-pulse of low tension and hemorrhagic tendency, symptoms similar to those which are observed on injection of mixed albumoses into the blood of animals.

At the session of May 10th WEST read a paper on "Intrapleural Tension." During normal quiet breathing intrapleural tension is always negative. During forced inspiration its negative value is increased, but during forced expiration tension may become positive. In pneumothrorax during inspiration the pressure cannot exceed that of the atmosphere or very slightly so, but the expiratory pressure is always positive and may be high, hence the lung will be compressed and the mediastinum may be displaced. These statements are based upon observations made in eleven cases of pneumothorax. In two of them the inspiratory pressure was zero, but in the rest it was positive, and in those in which effusion was associated it was high. The pressure when serous effusion exists alone varies greatly. There seems to be no definite relation between the size of the effusion and the amount of pressure, and the pressure may not be affected at all by inspiratory and expiratory movements. Inasmuch as the normal pleura is probably kept dry by the "lymphatic pump," *viz.*, respiration acting upon the stomata and the valved lymphatics into which they lead, it is evident that when the respiratory oscillation is absent the mechanism for the removal of food is at a standstill. When the respiratory oscillation has been found absent at the commencement of paracentesis it often returns at the end. This explains why the removal of a small amount of fluid often determines the rapid disappearance of the rest. In all cases of empyemia the pressure is considerably increased, though here, too, small effusions are quite as likely to have high pressure as large ones. Respiratory oscillation is likewise practically absent.

At the Medical Society, April 26th, ARMSTRONG read a paper on "The Therapeutic Value of Central Galvanization in Cardiac and Other Neuroses." The want of judgment in the selection of cases, and of precision in its application, together with the extravagant claims made for it, have brought this excellent method of treatment into disrepute. Its physiological effects are three-fold: stimulating, sedative, and tonic. The stimulating effect is immediate, the sedative quickly follows, and the tonic comes on more slowly. The most important effect is upon nutrition. During the passage of the current through the body heat is generated, substances are passed from one pole to the other, endosmosis and exosmosis are modified, and there is a marked acceleration of the process of oxidation. Secretion is largely influenced, as is excretion, especially in those gouty cases where there is deficient excretion, especially urea and uric acid. The structures mainly influenced by this method are the medulla, the pneumogastric nerves, and the sympathetic system. The applications should be neither too long nor too strong, and if headache, insomnia, nausea, or over-excited pulse, or a prolonged reaction of the nerves of special sense follows the treatment, its continuance should be watched with more than special care. Cases suitable for galvanization are: (1) cardiac and gastric neurosis; (2) neurasthenia and hypochondriasis; (3) cerebral exhaustion; (4) migraine; (5) exophthalmic goiter; (6) Raynaud's disease, and (7) spasmodic asthma. The therapeutic effects noted in the patients treated were a feeling of better health, an increase in brightness and clearness of thought, an improvement in appetite and digestion, and a marked decrease in the formation of indican, skatol, cresol, and oxalates. Sleep was markedly increased and was more calm and peaceful. The action of the heart became more regular, anginoid pains were relieved, the rapid pulse became slower, and the unstable nerve-centers were steadied so that they were not so readily acted upon by reflex causes, such as flatulence, absorption of toxins, etc.

At the session of May 9th MOULLIN read a paper on "The Treatment of Tuberculous Disease of the Bladder." He intimated that the local treatment of the tubercular bladder has fallen into its present state of disrepute because it has been too feeble and too late. Suprapubic cystotomy is an operation almost devoid of risk in the early stage of the disease, when excision or erasion is perfectly justifiable. The mucous membrane of the bladder rarely becomes affected through its epithelium. The bacilli invade it from some neighboring organ or through the blood-vessels or lymphatics. In the case of tuberculous pyelitis this is easy as there is a free communication between the lymphatics of the pelvis of the kidney and those of the mucous membrane of the bladder. When the disease begins around one of the ureters it is almost without doubt secondary. When it begins in the trigone this is not so certain. The success of surgical treatment depends upon early diagnosis and with the means now at hand this ought not to be difficult. In his hands opera-

tion was thrice performed with good results. In two other cases it might have been performed with equal advantage.

FREYER said that primary tuberculous disease of the bladder is very rare. He opened the bladder in six cases for tuberculous cystitis and afterward regretted it in every case but one. The trouble appeared to increase after erasion. Constitutional medical treatment does more for the patient.

BATTLE observed that it is worth while trying to benefit these patients as their lives otherwise are so miserable. He operated upon five cases; three of the patients were benefited, but in two no improvement was observed.

MACNAUGHTON-JONES described a case of "Complete Hepatoptosis in a Woman Aged Thirty-eight." As a child she had been delicate. After marriage she bore seven children. For obstinate vomiting and occasional hematemesis laparotomy was performed and what had been taken for a tumor in the right loin was found to be the displaced liver. It extended from the costal cartilages to the iliac fossa and rested upon the right kidney. The stomach was lifted out for examination but only congestion was found. The organs were carefully restored to their normal position but were not sutured. The patient made an entire recovery, with the help of an abdominal support and a carefully selected dietary.

BATTLE said that a woman, aged forty-five, with lax-pendulous abdomen had recently consulted him on account of severe pain in the right side. There was a mass believed to be the liver lying transversely just below the umbilicus. When the patient stood up this mass sank to the level of Poupart's ligament. A flannel bandage gave relief.

At the Clinical Society, April 22nd, TAYLOR and FRITT related a case in which a renal calculus was detected by the Röntgen-ray and successfully removed. The patient gave a history of renal calculus on the right side. Through a lumbar-incision the kidney was opened but no calculus was found. A few days later the Röntgen-ray showed the existence of a calculus high up in the pelvis of the kidney, and at a second operation the stone was found and removed.

At the session of April 29th EVE showed three cases of transplantation of tendon to correct the deformities of paralysis. His operation consists in making a longitudinal incision into the tendon of a paralyzed muscle and inserting and fixing into it the cut end of the tendon of a muscle which is normal. In many cases no doubt this acts merely as a support to a lax tendon, as if the normal muscle whose tendon is cut belongs to a different group it is scarcely likely that the patient will learn to use it otherwise.

ROLLESTON showed a man, aged thirty, suffering from left hemiplegia which occurred on the twenty-fourth day of an attack of typhoid fever. The fever ran a natural course and the hemiplegia gradually improved. In all the recorded cases of this lesion which were verified by autopsy there was embolism. It is a common occurrence in cases of typhoid fever to find minute thrombi in the renal vessels.

SOCIETY PROCEEDINGS.

AMERICAN ACADEMY OF MEDICINE.

Twenty-third Annual Meeting, Held at Denver, Col., June 4-6, 1898.

[By telegraph to the MEDICAL NEWS.]

THERE was more than the ordinary amount of interest manifested in the attendance upon the twenty-third annual meeting of the American Academy of Medicine which was convened Saturday, June 4th. There was the usually attractive program provided by the Committee of Arrangements as a proof of the growing popularity and usefulness of the organization which has labored long and faithfully upon its self-imposed task of elevating the moral, literary, and ethical standard of the medical profession. The treasurer, Dr. Charles McIntire of Easton, Pa., stated that there was a net balance of over $250 in the treasury at the close of the fiscal year. It is a noteworthy fact that the influence of the Academy is now to be felt in almost every portion of the United States, its membership including men of standing from thirty-nine of the States and Territories, the Army and the Navy, as well as from England, Burmah, and other foreign countries. Not only is this true, but the good work that is being accomplished is felt in college circles, and during the year just closing twenty-one of the leading collegiate institutions of the land have extended their hearty support and cooperation to the Academy. In this roll of honor may be found the names of Yale, Harvard, Pennsylvania, Williams, Columbia, Brown, Princeton, Lafayette, and Union.

The committee which had been appointed last year in Philadelphia to consider the advisability of selecting a permanent place of meeting for the Academy failed to make any recommendation, the different members offering suggestions *pro* and *con*.

A nominating committee appointed by the retiring president, Dr. L. Duncan Bulkley of New York, presented the following report:

For President, Edward Jackson of Denver, Col.; first vice-president, W. L. Estes of South Bethlehem, Pa.; second vice-president, J. T. Searcy of Tuscaloosa, Ala.; third vice-president, William Elmer of Trenton, N. J.; fourth vice-president, Robert Hall Babcock of Chicago; secretary and treasurer, Charles McIntire of Easton; assistant secretary, Walter L. Pyle of Philadelphia.

The scientific material presented was of excellent quality, and included the following articles:

"The Prevention of Diseases Now Preying upon the Medical Profession," by Dr. Leartus Connor of Detroit; "The Esthetic Relations of Medicine and Life," by Dr. George M. Gould of Philadelphia; "The Beginnings of Disease," by Dr. H. J. Herrick of Cleveland; "The Modern Sanitarium and Its Relation to the General Medical Profession," by Dr. J. C. Lichty of Clifton Springs, N, Y.; "The Child's Brain as Illustrated by Recent Neurologic Studies," by Dr. Rupert Norton of Washington; "The Interdependence of Healthy Bodies and Healthy Brains," by Dr. Elmer Lee of New York; "The

Ethical Advertiser," by Dr. F. T. Rogers of Providence; "Snags in the Course of the Medical Examining Boards," by Dr. Charles McIntire of Easton, Pa., and a series of papers on the general subject of "The Physiologic Aspect of the Education of Youth," participated in by Drs. Rupert Norton of Washington, Elmer Lee of New York, J. T. Searcy of Tuscaloosa, Ala., Charles Denison of Denver, Thomas C. Ely of Philadelphia, G. Hudson Makuen of Philadelphia, Charles G. Stockton of Buffalo, and Edward Jackson of Denver.

Dr. Connor, in dealing with "The Prevention of Diseases Now Preying upon the Medical Profession," remarked that all disease springs from either misplaced matter or misdirected force, singly or confined. Force acting in the wrong direction is destructive; in the right direction, constructive. Among the diseases (so-called) of the medical profession now definitely recognized and fully described are the following: Over-crowding, a vast horde of incompetents, large numbers of moral degenerates, crowds of pure tradesmen, blatant demagogues, hospitals organized and conducted to the damage of the profession, patients, and people, dispensaries and public clinics of the same character, medical colleges organized for the advantage of the few at the expense of the many and unmindful of advantage to students, medical societies so conducted as to be a bye-word among honest persons and yet continued to advance the financial profits of their leaders, domination by commercial interests of drug manufacturers and promoters of secret and proprietary medicines, the prey of money-making corporations as railways, accident-insurance companies and sanitariums, and the tool of lodges, secret and other social societies. The list, he claimed, was incomplete, but sufficed to indicate the existence of morbid action in almost every portion of the profession. It conceded that these diseases result from too many doctors, and the defective quality of a large number of these. The cure consists in an elevation of the standard of education from the public schools up to the medical college, where the standard of entrance as well as of exit should be of the very highest.

Dr. Gould presented a very able and witty paper upon the "Esthetic Relations of Medicine and Life," and enlarged upon the practical importance that is to be derived in almost every walk of life from the correction of physical defects and deformities, such as astigmatism, defective refraction, cutaneous diseases and blemishes, nevi and congenital or acquired nasal or facial deformities, as hare-lip, and sunken nasal bridge.

By far the most attractive and important feature of the meeting was the discussion of the subject of "The Physiologic Aspect of the Education of Youth," a public session being held in response to an invitation from the Women's Club of Denver. The various aspects of the subjects presented and considered were as follows: "How Education Fails — Physiologically Considered," by Dr. J. T. Searcy of Tuscaloosa, Ala.; "The Child's Brain as Illustrated by Recent Neurologic Studies," by Dr. Rupert Norton of Washington; "The Interdependence of Healthy Bodies and Healthy Brains," by Dr. Elmer Lee of New York; "The Advantage of Physical Education as a Prevention of Disease," by Dr. Charles Denison of Denver; "The Importance of Training the Special Senses in the Education of Youth," by Dr. Thomas C. Ely of Philadelphia; "The Training of Speech as a Factor in Mental Development," by Dr. G. Hudson Makuen of Philadelphia; "The Kindergarten," by Dr. Charles G. Stockton of Buffalo; "The Care of the Eyes During School Life," by Dr. Edward Jackson of Denver; "Kindergarten and Primary Grade Work in the Public Schools, and Its Influence upon the Eyesight," by Dr. Casey A. Wood of Chicago; "The Amount of Work a Growing Brain Ought to Undertake," by Dr. James L. Taylor of Wheelersburg, Ohio; and "The Importance of Early and Scientific Training of Children with Defective Speech," by Dr. W. Scheppegrell of New Orleans.

The essential features of the discussion as summed up by Dr. Connor were that the brain will not act properly unless there is a sound body; it will not properly develop without healthy avenues communicating with the external world, as a sound eye, and thorough ability of speech; the importance of good physical development to bring out the best action of the mind; all of the faculties should be developed in order to secure the best results; every cell in the brain and body should be brought into healthy action in order to secure a thoroughly educated child. The public schools of this country fail to accomplish this end, and in fact are not designed for this end at all.

The annual address of the retiring President, Dr. L. Duncan Bulkley of New York, was upon the subject of the "Dangers of Specialism in Medicine." He enlarged upon the disadvantages accruing both to the specialist and to the laity from this division of labor; the danger of narrowness of views and dogmatism; and the overlooking of concurrent and associated diseases dependent upon a primary condition coming under the attention of the specialist.

THE ASSOCIATION OF MEDICAL EDITORS.

The meeting was remarkably well attended and a vein of unusual seriousness regarding the ethics of advertising was exhibited. The expression of this took the form of the following resolution which was unanimously adopted:

RESOLVED, That matter which, in the judgment of the editor, is clearly in the nature of an advertisement, or reading notice, shall be excluded from the regularly paged parts of the journal and placed exclusively in the advertising pages.

Upon adjournment the members and their guests repaired to the banquet-hall where plates were laid for one hundred and fifty.

A meeting of the Association of American Medical Colleges was held June 6, 1898, in connection with the proceedings of the American Academy of Medicine. The address of the President, Professor J. W. Holland was a very able effort. An excellent paper was also read by Dr. Montgomery S. Crockett of Buffalo upon the subject "Medical Education Needs Better Pedagogic Methods."

At the Executive Session the following officers were elected for the ensuing term: Dr. H. O. Walker, of De-

troit, president; Dr. Ellis of Los Angeles, first vice-president; Dr. Woody, second vice-president; Dr. Bayard Holmes of Chicago, secretary and treasurer.

AMERICAN MEDICAL ASSOCIATION.

The Forty-ninth Annual Meeting, Held at Denver, Col., June 7, 8, 9, and 10, 1898.

[Special Telegraphic Report for the MEDICAL NEWS.]

GENERAL SESSION.

FIRST DAY—JUNE 7TH.

THE Association met in the Broadway Theatre, and in the absence of the President, SURGEON-GENERAL STERNBERG, it was called to order by First Vice-President JOSEPH M. MATHEWS of Louisville, Ky. Prayer was offered by Chancellor W. F. McDowell. Eloquent addresses of welcome were delivered by DR. J. W. GRAHAM of Denver, in behalf of local profession; by Hon. Alva Adams, Governor of Colorado, in behalf of State, and by Hon. W. S. McMurray, Mayor, in behalf of the City of Denver. The address of the President of the Association, by Surgeon-General Sternberg was read by Colonel A. W. Woodhull of Denver. (See page 737.) On motion Secretary Atkinson was instructed to telegraph the thanks of the Association to Surgeon-General Sternberg for his instructive and able address. The report of the Rush monument fund was read by DR. A. L. GIHON, showing that of the amounts pledged last year by the various State societies at the Philadelphia meeting, only $162 had been paid during the past twelve months. Colorado had announced that it has $2000 to add to the fund; New York State Medical Association $2000; and trustees of Medical Society of State of Pennsylvania, to whom was referred the report of the Rush Monument Committee, recommended to make good the pledge made at Philadelphia that the sum of $2000 be appropriated to the fund, and that amount be held in trust by the Board of Trustees of that society until a contract for erection of said monument is accepted. When these sums shall have been paid the fund will amount to $10,424.44, and there are still over forty States and Territories to be heard from. The Committee nominated for the position of treasurer, Dr. Holton of Vermont. Report closed with a resolution asking that necessary traveling expenses incurred by the Treasurer of the Rush Monument Committee, and those of Chairman or Secretary of the Committee, be paid by the Treasurer of the Association.

After the reading of the report DR. GORDON of Maine said the Maine Medical Association had appropriated $100 toward the fund; Dr Porter of Indiana had secured $500 from the Indiana State Medical Society; Dr. Cole of California, for that State $110, after which the report of the Committee was accepted.

Report of the Treasurer was read by HENRY P. NEWMAN of Chicago. He congratulated the Association upon its constantly increasing growth and prosperity. The year which closed January 1, 1898, added fifteen hundred new members and during the same time the Association had dropped for non-payment of dues only seventy-five members. Receipts during the time which he had the honor of being its treasurer had increased from $12,695.58 in 1894 to $32,200 in 1897. Balance on hand January 1, 1898, was $14,092.85, with a sinking fund of $3000. Report was accepted.

Report of the Secretary was read by DR. W. B. ATKINSON of Philadelphia. He stated that in accordance with a resolution adopted at the last meeting, he issued a circular letter to each State and Territorial Medical Society, notifying them of the action taken relative to the fund for the Rush monument and the desire to raise $100,000 for that purpose. Replies were received from several States that a special committee had been appointed to take charge of the matter and it was expected that such committees would report at this meeting.

In accordance with the by-laws the Secretary notified all in arrears for three years and in many instances these arrears were paid. On motion the report was accepted.

The general session then adjourned for the day.

SECTION ON SURGERY.

FIRST DAY—JUNE 7TH.

The committee on the Senn Medal, which was appointed last year, reported that the medal had been awarded to Dr. G. W. Grile of Cleveland, Ohio, for his paper, entitled "Experimental Research into the Effects of Temporary Closing of the Carotid Arteries; Report of the Case; Exhibition of a New Instrument," and it was arranged that this paper should be read before the Section on Thursday afternoon.

The Chairman, DR. W. L. RODMAN of Louisville, Ky., read an address, entitled

INFLUENCE OF AGE, SEX, AND RACE IN SURGICAL AFFECTIONS.

The susceptibility of the negro to disease three hundred years ago still exists, especially to local tuberculosis of the glands, skin, and bones. The negro is still obnoxious to fibroids, neoplasms, keloids, tetanus, etc., but it is believed by many that the African will at some time become as extinct in this country as has the buffalo. Cancer was rare in this race up to fifty years ago, but malignant disease has increased among them of late much more than among the whites. Cancer of the uterus is very frequent in negroes. The most common tumors of childhood are sarcomata, although the earliest case on record is that of a cylindroma occurring in a child aged eleven weeks. Tuberculosis is fast becoming the deadliest foe to the negro race, and is twice as common as in the white, while the Indians frequently develop this disease upon giving up their outdoor life to attend school. Gall-stones and chololithiasis are rare conditions before the age of thirty, but grow more common in advancing years, and are more frequent in women than in men, an explanation for which is the wearing of corsets and their sedentary habits. Several times more prominent in men than in women is aneurism, due to the greater tendency of the former to arterial degeneration. Speaking geographically, aneurism is very frequent in England, but rare in China, which freedom is due to the rice diet and habits of the people.

DR. A. D. BEVAN of Chicago read a paper, entitled

SURGICAL ANATOMY OF THE BILE-TRACTS.

He said a mental picture of the anatomy of the parts is necessary for the surgeon to do good work in this region. The surgeons of the present day are better pathologists, but poorer anatomists than in the past. For performing cholecystotomy a vertical incision along the outer border of the rectus muscle does very well, but the "T"-shaped incision is most objectionable as it is so difficult to suture, besides leaving a weak abdominal wall. The incision preferred at the present time is divided into the primary and extended, the primary being employed for exploration and other similar work, and is shaped like the letter "S," about three or four inches in length, and passes along and through the outer border of the rectus muscle. The extended portion of the incision is added when necessary, and may run from one to three inches in length, but the upper portion of the extension should not completely divide the entire thickness of the rectus muscle. This incision when complete furnishes free access to the bladder and the bile-ducts, and should always be made with a very sharp knife. In its performance a minimum amount of nerve-supply is injured as the incision runs almost entirely parallel with the nerves supplying the abdominal walls. Its relation to the costal arch makes hernia very improbable, but it should not be brought nearer than three-quarters of an inch to the costal border. In closing it is well to use silk sutures, passed through the entire abdominal wall, the skin being approximated with a continuous horse-hair suture."

DR. JOHN B. HAMILTON of Chicago, in locating the gall-bladder, first draws a line from the ensiform appendix to the superior spine of the ilium, a second from the umbilicus to the tenth costal junction, and a third transversely to these; the incision is made from one-half to three-quarters of an inch from the intersection of these lines. The gall-bladder is almost invariably found at this spot. However, the gall-bladder has a varying position influenced by atrophy or hypertrophy of the liver. Many cases of obstruction are due to the twisted or "S"-shaped condition of the cystic duct which, as pointed out by Fenger, can often be straightened and the symptoms relieved.

DR. HARRIS of Chicago entirely agreed with Dr. Bevan as to the relations existing between the ducts and the portal vein, and to the excellent advantage of the incision described by the author of the paper. Great care is necessary in suturing the extension of the lower end of the incision in order to avoid gaping.

DR. J. P. LORD of Omaha read a paper, entitled

INTESTINAL OBSTRUCTIONS FROM GALL-STONES.

After relating at length the history of the case reported and the operation performed for its relief, he said upon the third day after the operation evidence of peritonitis presented itself, lasting for two days, when convalescence began and continued uninterruptedly. The specimen removed, which was a portion of the bowel containing a mass of material about the size and shape of a small hand-bag, presented the appearance of having sustained loss of its substance by fracture of its apex. The body was for the most part smooth, with the exception of a small, irregular elevation on its side, which was believed to have been the cause of the perforation and peritonitis. Section of the specimen showed it to have a gall-stone for a nucleus. Eighty per cent. of cases of intestinal obstruction due to gall-stones occur in women, the great majority being well advanced in years. As gall-stones may exist for years without giving any evidence of their presence, it could not be any reflection upon the surgeon if the diagnosis was not made without operation. Spontaneous relief by the passage of the stone occurs in from thirty to fifty per cent. of the cases, the remainder dying unrelieved.

DR. P. S. CONNOR of Cincinnati read a paper, entitled

REMOVAL OF THE STOMACH.

After referring to the recent announcement that this operation had been successfully performed, the author claimed to have performed it fifteen years ago, the patient dying on the table. There being no physiologic, anatomic, or surgical contraindication to such an operation, he sees no reason why in cases where the stomach is functionally extinct, as in general infiltration of the gastric walls, it should not be performed, the objection being that by the time the condition is realized the patient is ordinarily in no general condition to withstand such an operation. The operation is not warranted except when the stomach has practically ceased to exist so far as its usefulness is concerned. As to removal of the stomach for other conditions than carcinoma, there certainly is no reason why it should not be done if it is simply acting as a receiving organ only, as the lower end of the esophagus can be readily attached to the duodenum or jejunum with the least amount of tension, and with the preservation of the intestinal function.

DR. D. W. GRAHAM of Chicago asked if the author anticipated much difficulty in securing the end of esophagus in cases where the entire stomach had been removed.

DR. KEEFER of St. Louis referred to the connection through the pneumogastric nerve between the floor of the fourth ventricle and the liver, and asked if it was possible to remove the entire stomach without severing some of the fibers of this nerve, and if not, what the result of such an operation would be upon the liver.

DR. HARRIS of Chicago reported having removed the entire stomach for carcinoma a year ago in the case of a man seventy-two years old, in whom the esophagus was attached to the duodenum without difficulty, and believed this would often be possible on account of the extreme mobility of the duodenum in cases of carcinoma of the pylorus. As to the pneumogastric nerve the right one need not be interfered with in this operation since it passes into the liver high up.

DR. W. J. MAYO of Rochester, Minn., read a paper, entitled

THE DIAGNOSIS AND SURGICAL TREATMENT OF MALIGNANT OBSTRUCTION OF THE PYLORUS, WITH REPORT OF THREE PYLORECTOMIES AND FOUR GASTRO-ENTEROSTOMIES.

After referring to the writings of a number of men upon

the subject of the paper, and the different views as to the etiology of the disease, the author said the diagnosis of obstruction of the pylorus and the resulting dilation of the stomach is not a difficult matter, but the differential diagnosis as to the malignant or non-malignant character of the obstruction is often very difficult and occasionally impossible without incision of the abdominal walls. The history of the case provides an important means of diagnosis, combined with results of careful inspection of the patient and examination of the gastric contents. The X-ray is of very little assistance in diagnosing this condition. The routine use of the stomach-tube, and the employment of a carefully regulated diet, bismuth, salol, and methyl blue, with three grains of powdered nutmeg after eating, promise good results. Two operations only are worthy of serious consideration, pylorectomy, which is a radical operation based on the hope of a cure, and gastroenterostomy for palliative purposes. The great mortality of the former, renders it a most unpopular operation, but improvements in the technic will soon overcome this objection. The method usually employed by the author, he divides into five steps, the first being the median incision above the umbilicus, to which, if necessary, a cross cut of the rectus is made; the second, a double ligation, and division of the necessary amount of gastrohepatic omentum; the third, the isolation of the diseased part by a piece of gauze drawn under it and the subsequent removal of this part; the fourth, the slipping to the right of the end of the stomach, and the suturing to each other the ends of the tied omentum, and the fifth, the amputation of the duodenum at a healthy point, to be followed by the insertion of the Murphy button. The author concluded his paper by giving a detailed description of the seven cases on which he had performed this operation.

DR. J. B. MURPHY of Chicago entirely agreed with Dr. Mayo as to the importance of early exploratory operation in these cases, believing that the risk of such a procedure is less than one per cent. Usually the surgeon does not see these cases until they have passed beyond the line where the preservation of life is possible under any circumstances.

DR. JOHN B. HAMILTON referred to a case of a woman, thirty years of age, upon whom an exploratory incision was done three years ago, and whose weight has since increased more than fifty pounds.

DR. WM. F. METCALF of Detroit, Mich., read a paper, entitled

INTESTINAL ANASTOMOSIS BY A NEW METHOD.

He said if any device is used in intestinal anastomosis it should be rigid, so as to hold the parts firmly in apposition, should pass away quickly, to leave the lumen of the gut free, so soon as its function is performed and the suturing is done and it should be easy of introduction. With these objects in view he experimented upon the use of sugar in the form of cylinders of hard candy and the results obtained were very satisfactory. After referring to the method of preparation and use of this device, showing diagrams and specimens illustrative of its employment, he claimed that the advantages were the quick disappearance of the approximator, the accurate adjustment of the mesentery before suturing, the ease and rapidity with which union is effected, the cheapness of manufacture, the tendency to prevent accumulation of fluid, and the formation of abscess beneath the mucous coat.

DR. H. H. GRANT of Louisville, Ky., opposes the employment of any mechanical device in performing these operations, considering them entirely unnecessary with the possible exception of the occasional use of the Murphy button. He believed that in lack of skill on the part of the operator generally arises the necessity for the use of devices and considers that they take time and add to the risk of hemorrhage.

DR. METCALF stated that it is possible to perform these operations in much less time by the aid of this device than is otherwise the case.

DR. ERNEST LAPLACE of Philadelphia read a paper, entitled

A NEW METHOD OF PERFORMING INTESTINAL ANASTOMOSIS AND ENTERORRHAPHY.

He said that the necessity for rapid and accurate suturing in performing intestinal anastomosis as well as other considerations have led him to devise a forceps which presents special characteristics as well as the advantages of being rapid and accurate, easily adjusted, and susceptible to construction in various sizes. He described the instrument at some length and demonstrated the method of its employment in cases of lateral and end-to-end anastomoses and invagination, and showed a number of illustrations.

DR. MCRAE of Atlanta, Ga., believed the instrument was a very useful one and would have a wide field for employment in the future.

DR. B. MERRILL RICKETS of Cincinnati, O., read a paper, entitled

ANEURISM OF THE AORTIC ARCH, SURGICAL TREATMENT BY LIGATION OF THE RIGHT CAROTID AND SUBCLAVIAN ARTERIES.

The author stated that he desired to call special attention to aneurism of the aortic arch, the successful treatment of which at the present time is practically nil in all ways other than surgical, even the latter having been of little consequence until in recent years. He referred to the results of ligation performed by Christopher Heath in 1865 and the nine additional operations devised since that time. He believes that recumbency and diet are advisable in all cases of aneurism, and in some cases the addition of mercury and the iodid before and after surgical intervention. Referring to the introduction of gold wire with the addition of galvanism, he thinks this the most rational method of dealing with many of these cases, although attended with great risk and mortality. As to the diagnosis of aneurism of the arch this is very uncertain and its existence may be entirely unknown until after death. The author concluded his paper with a detailed history of a case in which the subclavian and common carotid arteries of the right side were ligated and recovery followed. The patient has gained twelve pounds since the operation.

The following conclusions were submitted: First, the remedy lies within the domain of surgery. Second, there are but two methods at the present time to be considered—obstruction of the right subclavian and common carotid arteries and the introduction of wire or needles into the sac with or without galvanism. Third, either one or both of the operations should be applied in all cases after a thorough saturation with the iodid. Fourth, ligation is attended by less danger, less mortality, greater and more permanent and universal benefit. Fifth, ligation of the subclavian and common carotid arteries is less dangerous than ligation of the innominate. In fact the latter should not be done.

SECTION ON MEDICINE.

FIRST DAY—JUNE 7TH.

The Chairman, DR SAMUEL A. FISK of Denver, opened the meeting with a brief address outlining the work of the session. He expressed the hope that the ends of true scientific medicine would be served by the work of the Section.

DR. J. C. WILSON of Philadelphia read a paper upon

PERFORATING PERITONITIS.

The cause, he stated, might be the perforation of any hollow viscus, most often the stomach or intestines, notably the latter in typhoid fever. Though the discovery of a cause is to be sought, still the important point is the diagnosis of the condition from the symptoms, but it is often necessary to leave the closer diagnosis for the operator. The symptoms of most importance are pain, rigidity of the muscles of the abdominal wall, and increase in pulse-rate. Tympanitis is often too late a symptom to be of importance. The general demeanor of the patient is a valuable guide. The object of this paper is to urge the importance of early diagnosis and the immediate resort to operative interference. Delay means death in nearly every instance.

DR. W. W. KEEN of Philadelphia remarked that these cases are frequent in medical practice, and operations should be undertaken during the first hours of the attack. The incision should be large, and frequently incisions on both sides of the abdomen are advisable. The results are good in cases treated early.

DR. J. H. MUSSER of Philadelphia suggested that the difficulty of diagnosis is great, and the exploratory incision is frequently a valuable resource.

DR. L. F. BISHOP of New York said the importance of avoiding the use of opium in all suspected cases cannot be too much emphasized. The value of ice in relieving pain when applied freely by ice-bags should not be forgotten.

DR. H. A. HARE of Philadelphia claimed that pain is not a reliable symptom. When he himself had typhoid he had an attack of pain that was of the character supposed to indicate perforation, but it proved to be due to distension of the intestines by gas.

DR. WILSON, in closing, said many patients are brought to the hospital narcotized by opium, with the abdomen hard and distended by gas, the pulse rapid and feeble, and the whole condition hopeless. The use of opium certainly leads to a high mortality by obscuring symptoms until it is too late to save the patient.

DR. H. A. WEST of Galveston read a paper, entitled

DIFFERENTIAL DIAGNOSIS BETWEEN YELLOW FEVER AND DENGUE, WITH SOME ACCOUNT OF THE EPIDEMIC OF 1897 IN TEXAS.

(See MEDICAL NEWS, page 740.)

SECTION ON MATERIA MEDICA, PHARMACY AND THERAPEUTICS.

FIRST DAY—JUNE 7TH.

The Chairman, JOHN V. SHOEMAKER, M.D., of Philadelphia, delivered an address upon

CHEMICAL RELATIONS OF REMEDIES IN SCIENTIFIC THERAPEUTICS.

He said a great advance has begun in the introduction of animal extracts, serums, and antitoxins into medicine. It will be worth while to make trial of suprarenal extracts and experiment with extracts of the brain and spinal cord in the treatment of neurasthenia, locomotor ataxia, and senile debility. The toxins which have been proven of value should be made officinal and adopted into the pharmacopœia, since it is in this line that future progress is to be made.

EDWIN KLEBS of Chicago read a paper, entitled

AIMS OF MODERN TREATMENT OF TUBERCULOSIS,

which was referred to a committee. A synopsis of this paper will be given before the Section to-morrow.

DR. CHARLES DENISON of Denver read a paper upon

THEORIES AND CONCLUSIONS ON THE MODERN TREATMENT OF TUBERCULOSIS.

He takes the stand that there is no settled treatment for tuberculosis as there are no two cases just alike in their several phases. Representing the benefit to patients suffering from tuberculosis as 100 per cent., 45 per cent. are affected by climate and changes involving mental influence, exercise, and out-of-door life; 30 per cent. are due to good feeling, local supervision, and medical treatment; 25 per cent. to inhaling, local medication, surgical interference, specific medication, and antitoxin treatment. So saturating the blood with creosote, for instance, that the bacillus will be stopped in its growth and the patient not be injured thereby, is, I think, a mere speculation. I doubt whether inhaled substances ever reach the air-vesicles and terminal bronchioles where the disease is located. The more a lung is diseased with tuberculosis and the accompanying infiltrating and shrinking process, the less is the possibility that inhaled medicaments can reach the affected parts. The reciprocal relation of diseased and healthy lung in the same thorax, and of the heart and blood within a given chest with reference to respiration, does not seem to me to have been sufficiently recognized by any one. I would like to demonstrate more clearly than has been done heretofore the fact that (1) correct inhaling, or, more properly, exhaling, (2) altitude above sea level, (3) rightly directed gymnastic training, all work on the same principle of mechanical distension of the air-cells. We have failed to recognize the mechanical conditions within the chest which govern respiration and blood circu-

lation. The blood does not flow alone because the heart pumps it, but because the lung mechanism draws it in and forces it out again. Any system of training to be of use must depend upon the mechanical distension of the air-cells. I wish to make my protest against the surgeon's hasty interference in operating upon anal fistula while tuberculosis is in the lungs; it may be considered a means of elimination, and unless such elimination is provided for an operation should not be performed. If the disease is due to a special toxin working in the system it must be only through the development in that system of the proper antitoxin, or the appropriation of it from outside the body, that the disease may be opposed. The opposers of antitoxin are inconsistent in that, while they admit the existence of a toxin, they deny the possibility of an antitoxin. I firmly believe a considerable percentage of cases of tuberculosis could be held in check, if not cured, if with the present advanced technic in the manufacture of the tuberculin preparations, the physicians using them had the required knowledge to determine what patients could be treated by this method and how far the treatment should be pushed. The serum treatment of tuberculosis is as yet a beautiful dream, which I hope may be realized. My conclusions are that combined methods are superior to any given branch of treatment; that seasonable change of residence to a well-selected, high-altitude climate with its possibilities of out-door life is the best possible method for retarding the advance of consumption; that exercise is necessary to promote cell activity and distension of the cells; that it is a mistake to overwhelm the body with frequent injections of undetermined animal serums producing a cumulative toxemia; that the key to the direct method of specific treatment comes through the skilful determination of the proportion of infection, the balance between vital resistance and the disease.

DR. SHERMAN G. BONNEY of Denver read a paper upon

THE TREATMENT OF TUBERCOLOSIS.

He contends that climate, in conjunction with painstaking attention to details of management, offers to the pulmonary invalid greater assurance of improvement than can be otherwise attained. In many patients who come to Colorado the duration of several years of illness is disclosed with ample opportunity for earlier climatic change. Colorado is especially adapted for the early cases and contraindicated for late stages. It is a mistake to order patients away from home with directions not to see the doctor in the new location. One-third of the patients who seek a physician in Colorado present a history of several months already spent here, their medical supervision having been carried on by the home physician from a distance of two or three thousand miles. For the use of tuberculin in Colorado I see but little justification. Its use should be limited to early cases, and these cases are they which submit most easily to the favorable climate of this State. I am convinced that the moral effect of this treatment is distinctly bad. The patient should be out in the sunshine and fresh air, and removed from the depressing influence of the physician's office.

DR. A. E. WAXHAM of Denver read a paper, entitled

CLIMATE VERSUS SERUM TREATMENT OF TUBERCULOSIS.

Because a patient has tuberculosis is no reason, he said, why he should be sent two thousand miles away from home, comfort, and friends, only to find perhaps his malady increased, and to die among strangers. We should prescribe climate with as much discretion and judgment as any other remedy. Whether a patient should be sent from home in search of health will depend upon several conditions. The stage of the disease, the vigor, vitality, and disposition of the patient, and the means with which to live comfortably, are all to be considered. Tuberculosis in the last stage is only aggravated, and the condition made worse by residence in this altitude. Climatic treatment should be applied early. In selecting cases for this treatment, select the early ones instead of waiting until the golden opportunity is lost in the hope of warding off the disease by less effective means. Financial factors must be considered. Many a case is aggravated as a result of anxiety and forced economy. If the patient's circumstances are such that he cannot live a year in idleness it is folly to send him here. A contented mind, abundant food, and cheerful surroundings are essential factors. Early cases of tuberculosis, with no heart lesions, are best adapted to the high altitudes, and the invigorating, stimulating atmosphere of Colorado. More advanced cases need a warmer climate, such as Arizona or New Mexico. Many cases do well in Colorado in the summer and fall, but do not bear our cold weather. Many do well in Arizona in winter who cannot endure the heat of its summer. The success of climatic treatment will depend on the proper selection of the climate, and the proper selection of the cases as well. The effects of tuberculin in tuberculosis are disappointing. Altitude, pure air, sunshine, uniformity of climate are essential factors in treating tuberculosis because these conditions invigorate the system and stimulate the production of the normal antitoxins of the body.

DR. E. FLETCHER INGALLS of Chicago, in discussing these papers, said I think it true that patients should not be sent away for a change of climate who are not able to take care of themselves properly when they get there. I do not send advanced patients to Colorado. I think inhalations have some effect, not from the remedy used but from the fact that the air-cells are dilated. The surgical treatment of tuberculosis seems to me entirely unscientific. There is no more chance of relieving a patient in that way than of disinfecting a large sponge by injecting it with an antiseptic needle. It appears to me that the result of treatment of tuberculosis by the serum methods demonstrates that the smaller the quantity used the greater the benefit, in other words the smaller the quantity used the less harm done.

DR. R. H. BABCOCK of Chicago considers the incipient stage as a pure and unmixed infection; the later stage as a mixed infection, tubercles have sunk into the background, and pus infection is in the ascendency. The former is easily curable; the latter is capable of arrest. I

have used all forms of antitoxin treatment of tuberculosis, the various derivatives of tuberculin, and the various sera, and my experience is that the earlier we begin the greater the prospect of arrest. I do not believe any of these means will bring immunity.

DR. ANNAS contended that we make a mistake in discussing tuberculosis as if it were one distinct disease. We have simply a set of symptoms. I think the patient should be protected against himself, he must not swallow the sputa, must not scatter the poison about him. Confined in the house he is infecting himself; out of doors he is being protected against himself.

DR. CHAS. LYMAN GREEN plead for better statistics relative to the therapy of tuberculosis. Conclusions should not be based on less than five years of use of a treatment on an individual. I do not believe such powerful remedies as the antitoxins should be in general use.

DR. ALBERT E. MILLER of Boston thought more depends upon the nutrition than upon anything else. Climate nor tuberculin will cure unless the patient is properly nourished.

SECTION ON NEUROLOGY AND MEDICAL JURISPRUDENCE.

FIRST DAY—JUNE 7TH.

The address of the Chairman, entitled

PROGRESS IN NEUROLOGY,

was read by DR. CHARLES H. HUGHES of St. Louis, Mo., who spoke of the various advances made along neurological lines within the last twelve months. Removal of the ovaries formerly proposed for insanity among women, is now considered unjustifiable except where the generative organs are diseased, as the neuropathic diathesis is not removable by the knife. The surgical treatment of exophthalmic goiter should be condemned. It is too destructive and is unnecessary, since this disease is almost invariably curable without operation. Excellent results are obtained from arseniated and phosphorated bromid and blood reconstruction treatment, with adequate nerve and brain rest and changed mental environment for the patient. The neuron is now a proven unit in physiologic and pathologic processes.

DR. W. J. HERDMAN of Ann Arbor, Mich., presented a paper upon

NEURAL DYNAMICS.

The relations of associated neurons to each other are similar to charged electric condensers, disturbance of the potential in one producing correlated changes in the associated ones. A theory might be proposed to account for the generation of nerve force, and its conduction in the neuron and transmission from neuron to neuron. To do this it is necessary to reduce to their simplest conceptions physical and physiologic conditions present in the structure of the essential elements of the nervous system and to state what appear to be the most probable physical results of such conditions consistent with the phenomena observed.

DR. SEARCY of Tuscoloosa, Ala., said the unit of life is the cell of the nervous system, the nerve-cell. Most philosophic theories would be simplified if vital motion was described by simpler vital motion; as in the extremely complex nervous system of man by studying the movements of the lower organisms, as amebæ and protozoa.

DR. HENRY GRADLE of Chicago read an article upon

DIAGNOSTIC CHARACTERISTICS OF HEADACHES ACCORDING TO THEIR ORIGIN.

He especially referred to headaches dependent upon affections of the special senses, and said the peripheral lesion, and also the condition of the nervous system must be considered. The most important question concerning the site of a headache is whether it is wholly or predominantly one-sided. One-sided headache is always due to a lesion on the same side of the head, intracranial, or in one of the organs of sense. As to their time relations, headaches can be classified as: (1) paroxysms recurring at (*a*) irregular or (*b*) regular intervals; (2) attacks following some specific act, and (3) more or less continuous pain. The cases classified under (1) (*a*) constitute the form called migraine. As to headaches following specific acts the most characteristic is the pain induced by use of the eyes for near work.

DR. C. M. HOBBY of Iowa City read a paper, entitled

SOME CAUSES OF WRYNECK.

Torticollis has recovered after removal of ocular conditions unlikely to have exerted a causative influence in its production. The first case was in a boy aged fifteen years. Deformity had existed several years and the muscular contraction was apparently structural. No spasmodic element was detected and the abnormal position was constant, the head being drawn well toward the right shoulder. Forcible correction was attended by diplopia, and it was found that paresis of the left inferior rectus existed. Subsequent tenotomy of superior rectus led to gradual but complete recovery from the torticollis. Second case was that of a boy aged twelve years. There was a history of impaired vision and asthenopic symptoms for more than a year. Three weeks after examination the patient had had severe headaches, nausea, and vomiting, coincidentally with diplopia. The head became twisted down toward the right shoulder. Examination showed 8o° of esophoria in each eye, accompanied by low grade of hypermetropic astigmatism. Correction of refraction and "ocular gymnastics" induced recovery in two months.

DR. CASEY A. WOOD of Chicago read a paper upon

THE METHODS EMPLOYED IN EXAMINING THE EYES FOR THE DETECTION OF HYSTERIA.

The commonest ocular signs of hysteria are defects in the focusing power of eye—anomalies of accommodation. Other conditions are hysterical insufficiency of accommodation, ciliary hyperesthesia, ciliary paresis or paralysis, painful accommodation, nervous asthenopia, and are rarely permanently relieved by glasses or exclusively local treatment of the eye. This so-called paresis of accommodation is generally in the form of a true hysterical contracture of the ciliary muscle.

DR. HOWELL T. PERSHING of Denver exhibited two patients, one a young man, suffering from aneurism of the

internal carotid. The prominent symptoms were diplopia, which was relieved by treatment, and occasional blowing sound in the ear. When present, the latter was readily distinguishable by the observer. Second patient, a man advanced in years, had syringomyelia with Charcot's disease of shoulder, and marked hemiplegia.

SECTION ON DISEASES OF CHILDREN.

FIRST DAY—JUNE 7TH.

The address of the Chairman, DR. J. P. CROZER GRIFFITH of Philadelphia, was read:

RISE OF PEDIATRICS AS A SPECIALTY.

This was followed by a paper from DR. LOUIS J. LAUTENBACH of Philadelphia upon "Prompt Attention to Earache in Infancy and Early Childhood." No discussion.

DR. R. B. GILBERT of Louisville read an article upon

WHOOPING-COUGH.

In this he stated that four-fifths of the deaths occurred in children under two years of age. The disease is most fatal in extremely hot or cold weather. Tincture of belladonna in increasing doses as soon as disease is recognized was advised, to which bromid of potassium and phenacetin could be added.

DR. LOUIS FISCHER of New York agreed that antipyrin in some cases does good. Bromoform properly given is also useful, but one must be sure to procure a good product. Poisoning from bromoform settling to bottom of the bottle should be avoided. The best treatment consists in sending the child into the park to receive pure air, and in sleeping with the windows open at night. Dr. W. A. Fankboner of Marion, Ind., secures good results in some cases with quinin, 10 grains three times daily. Dr. H. M. McClanahan of Omaha emphasized the importance of nourishment, and advises feeding immediately after the paroxysms. He considers antipyrin the best drug.

DR. J. M. POSTLE spoke of the pathology. Ptomains seem to affect chiefly nerve cells governing expiration, inducing a condition of depression. The peculiar inspiration results from stimulation of nerve cells governing this act by an excess of carbonic acid gas in the blood. It is believed that carbonic acid gas in blood destroys the ptomains. Strychnia is advised to overcome the depression and prevent destruction of the ptomains by excess of carbonic acid gas in blood, thus securing the immunizing effect of ptomains.

DR. I. N. LOVE of St. Louis contended that all such diseases should be treated on the principle of elimination. Improve the assimilation to build up the patient. Purge thoroughly and saturate with quinin. Acetanelin, bicarbonate of soda, and caffein are useful; also. bromoform three or four times a day in increasing doses.

DR. GREEN of Michigan considered three things as important in the treatment: Warm clothing, fresh air, and nutritious food. In the last five years he has used no medicine.

DR. GILBERT, in closing, said purgation was uncalled for when there is a diarrhea. He has had bad results from antipyrin, and prefers phenacetin. The effect of bromoform is no better than from bromids. Sanitary measures contribute to the cure, but therapeutics are valuable. The theory of germ-producing toxins which act on the nervous system is attractive, but not easy to demonstrate. Strychnia is a dangerous remedy. Care should be exercised in sending children to the parks lest the disease be disseminate.

DR. A. E. GALLANT of New York read a paper upon

FRACTURE OF THE CLAVICLE IN CHILDREN,

based upon a study of 200 cases treated by Sayre's method. In a surgical service, including 18,042 children of ten years and under, there occurred 343 fractures, and of these 172 were of the clavicle. Most frequent point of fracture was in outer portion of the middle third, the shoulder dropping downward, inward, and forward, dragging on acromial fragment in such a way as to make an angle at the seat of fracture. The inner fragment has not been found displaced above the outer one, as described by Sayre and Gray.

DR. A. C. COTTON of Chicago observed that continued use of plaster may be impracticable because of irritation. Sometimes he uses a stocking over the arm, which is firmly bandaged.

DR. R. B. GILBERT, in one patient, overcame the irritation by using a moleskin bandage, perforated. Adjustment of the plaster should be accomplished undechloroform, but often only partial anesthesia is necessary.

DR. GALLANT, in closing, emphasized difficulty of preventing movement, although movement does not always prevent healing. Infants' clavicles broken during delivery may be united before the accident is recognized. He prefers the use of laughing-gas for short operations.

DR. J. A. WORK of Elkhart, Indiana, read an article, entitled

SOME THOUGHTS ON THE CARE OF INFANTS AND CHILDREN.

He referred to injury of the brain with forceps, and the cervical portion of spinal cord during delivery. After delivery, fresh aseptic lard is best for cleansing the infant. No soap or water is required. Children should not be weaned from natural food too soon without reasonable cause. When insufficiency of natural food is noticed, gradually add the artificial, and the child will usually wean itself. Next to mothers' milk cows' milk is to be preferred. If milked into sterilized containers and used soon there is no more necessity of sterilization than it would be to sterilize the mother's milk.

GENERAL SESSION.

SECOND DAY—JUNE 8TH.

The Association was promptly called to order by Second Vice-President THOMPSON. Dr. Dudley S. Reynolds of Louisville presented a resolution to the effect that after January 1, 1899, any college professor or other teacher who shall confer any degree upon any person not complying with the standards of American Medical Association regarding educational requirements, shall hereaf-

ter be excluded from meetings of the Association. This was referred to the Executive Committee.

A resolution by DR. W. W. KEEN of Philadelphia was introduced favoring vivisection for purposes of experimental research. Referred to the Executive Committee.

DR. H. A. HARE of Philadelphia offered a resolution relative to the State and County Medical Societies of the State of New York, asking that they be allowed to send regularly recognized delegates to the National Association. Referred to the Executive Committee.

DR. GEO. M. GOULD of Philadelphia presented a resolution, the purpose of which was to encourage the establishment of medical libraries throughout the United States.

DR. WILLIAM BAILEY of Louisville introduced an important matter in the form of a resolution to the effect that an office of general secretary be created with a salary not to exceed $2500 or $3000 per annum. He said that the association had grown to such proportions that the services of at least one salaried man were required, who would devote his entire time to its interests. By this resolution the present Secretary, Dr. Atkinson, would be retained as an honorary officer. Resolution was referred to the Executive Committee.

DR. SANDERS of Alabama recommended in a resolution that the Association take steps leading to the establishment of a public health bureau, having its representative in every city and town in the land and an executive head in the National Government.

DR. HUMISTON of Ohio read a report, adopted by the Ohio State Medical Society regarding the Antivivisection bill and recommended that in addition to other committees being named, one should be composed of residents of Washington, Philadelphia, and Baltimore. Under this arrangement there would be the assurance of prompt attendance of committeemen whenever the bill referred to came up.

DR. J. H. MUSSER of Philadelphia then read the General Address on Medicine, entitled

AN ESSENTIAL OF THE ART OF MEDICINE.

He said the closing years of the Eighteenth Century and the early years of the Nineteenth marked an epoch in medicine as transcendent for its welfare as the events of the past decades bespeak for the glory of the medicine of the future. The state of medicine in the Eighteenth Century was the result of deductive methods of reasoning, made possible because of the want of instruments of precision. Elaborate classification of disease and refinements of symptomatology which serve only to amuse and appal were the results. The sway of the imagination and the rule of theory were all powerful. Speculative modes of treatment grew out of the specious pathology. Venesection, polypharmacy, and stimulation were followed by expectant treatment and ninilism. Diagnosis was an intuition and an art. Cullen said theory could control observation, but medicine as a science was no higher nor lower than its cognate departments of knowledge. Science was not applied to industrial arts at this time, and so they were carried on by rule-of-thumb methods. Medicine ceased to be deductive; its practice began to be scientific.

Medicine has grown to be a science—a department of the science of biology. The history is the history of the application of scientific habits of thought to experiment, observation, and analysis. Medicine grew to a science by the labors of physicians who were naturalists. Clinical medicine, as a science, embraces diagnosis and therapeutics. Methods of diagnosis of the present day require a scientific habit of mind and skill in the use of instruments of precision. The scope and positiveness of diagnosis has greatly increased, as fifteen diseases can now be positively recognized, without any possibility of error. Diagnosis has grown to be scientific, precise, and positive. Error in method leads to error in diagnosis. Therapeutics grew to a science by the influence of various forces, all the outcome of the mode of thought of the naturalist. The science of statistics shows the fallacy of determining the value of a drug from a small number of cases in which it is tried. Analysis of 12,000 prescriptions has shown that various drugs were called for about 31,000 times, and preparations of nux vomica, iron, opium, mineral acids, cinchona and its salts, mercury, ipecac, bismuth, belladonna, arsenic, squills, hyoscyamus, and digitalis, were called for in one-third of the total. and if external remedies and excipients are excluded, in one half.

Skepticism arose because too much was claimed. The more incurable the disease the greater the number of drugs claimed to cure it. The more virtues a drug is said to have, the less its probable value. Polypharmacy was assaulted in the past, but still holds sway. Drugs no doubt have an action in health and disease. There use may be of advantage but usually is not necessary. We need not be skeptical about the power of the drug, but about its necessity. Expectancy and hypnotism, for therapeutic purposes, can be secured by an honest examination of the patient. The "lie" is not required in medicine any more than in religion, as Zola points out.

Application of science to industrial art at the present time shows that in every department scientific methods are necessary. Brewing, iron-making, leather-making are no longer an art but a science. Art is gone; science holds sway. The large amounts of capital involved and great competition have forced out the element of chance as in art and instituted the element of certainty that approaches science. Since the science of medicine is essential to the art we must educate our students to a scientific habit of thought.

Adjourned to the following day.

SECTION ON MEDICINE.

SECOND DAY—JUNE 8TH.

The first paper upon

DIABETIC GANGRENE,

was read by DR. N. S. DAVIS, JR., of Chicago. In the discussion Dr. Warren remarked that in forty per cent. of diabetic cases which live long enough tuberculosis develops. When a case is going badly it is useless to amputate, because the gangrene is only a local exhibition of

a general condition which affects every cell of the body. It, however, may do to amputate in a case going well. One cannot set rules while in such ignorance regarding the disease. Dr. Davis contended that it is not necessarily objectionable to amputate a second time if the first is unsuccessful. There should be thorough antiseptic treatment of gangrenous wounds in cases of diabetes. Sudden disappearance of sugar from the urine has been observed where there was tuberculosis of the lungs. We cannot judge of arterial sclerosis entirely by the arteries we can easily handle, for it is often circumscribed within small areas. A fact brougnt out by study of diabetes is the very early development of arterial sclerosis, in many cases between twenty and thirty years of age, at a period of life when we rarely expect to find it.

DR. L. F. BISHOP of New York presented a paper, entitled

THE COURSE AND MANAGEMENT OF CHRONIC COMPLICATING MYOCARDITIS.

Complicating myocarditis, he said, is an important factor in many conditions. The heart muscle should be studied carefully in acute and wasting diseases of whatever nature. Arrhythmia occurring where this symptom has not been previously shown is suggestive of a complicating myocarditis. Jacobi asserts that after every case of typhoid, scarlatina, diphtheria, or smallpox we must prepare ourselves to be overtaken by some cardiac disease. Too often cases diagnosed general debility are due to disease of the heart muscle. Light, systematic exercise should be employed in treatment, with concentrated foods, but alcohol, tobacco, tea, and coffee should be eschewed.

DR. FRANK BILLINGS of Chicago read a paper upon

DIFFERENTIATION OF THE CARDIAC INCOMPETENCY OF INTRINSIC HEART DISEASE AND CHRONIC NEPHRITIS.

In all inflammatory diseases of the kidneys he said there are cardiovascular changes. In chronic nephritis while the cardiovascular changes are less marked, dropsy may occur with all the phenomena of an incompetent heart. The incompetent heart of arteriosclerosis may present phenomena so nearly like the clinical findings of inflammatory condition of the kidneys as to be differentiated with difficulty. There are some special signs valuable in differential diagnosis. If the urine shows relatively low specific gravity, with diminished total solids, lessened urea, much albumen, casts of all varieties, the pulse full and sustained, dropsical effusion poor in albumen and containing urea in a considerable amount, tendency to persistent morning nausea, vomiting of stringy mucus, frontal or occipital pain, tendency to alternating mental excitement, somnolence and coma, epigastric pain, eye ground showing changes of albuminuria, and patient possesses waxy face and general anemia, the diagnosis is favorable to nephritis. If heart action is irregular, pulse weak and not sustained, with or without arterial sclerosis, dyspnea of exertion attended with cyanosis, only moderate degree of anemia, dropsical effusion relatively rich in albumen but containing little or no urea, considerable enlargement of liver and tenderness of left lobe, urine scant, high specific gravity, but few casts, little headache, no eye-ground changes, and if thrombosis or embolism occur, the diagnosis is in favor of intrinsic heart disease.

DR. H. A. WEST of Galveston said, in discussing the paper, that if the renal symptoms are due alone to circulatory disturbance of the kidney, placing the patient upon digitalis and strychnin and freely stimulating the emunctories will in many cases clear up the diagnosis.

DR. BROWN of Illinois had made a diagnosis not upon the presence of albumen and casts, but upon symptoms which are referred to organs external to the kidneys, the forcible pulsation of the heart, palpable pulsation of the systematic arteries, etc.

DR. R. H. BABCOCK of Chicago: I would like to emphasize the point of pulse tension in this differentiation. If the pulse be carefully studied by the sphygmograph and auscultation of the aortic second sound be performed, much valuable information will be derived.

DR. ANDERS of Philadelphia: In cases of so-called chronic interstitial nephritis with lesions of the heart associated, as a rule, there is one fundamental cause, general arterial sclerosis. For a time the left ventricle meets the demands of the heart for increased work, but a time comes when the heart can no longer compensate, and the left ventricle begins to weaken and the urinary symptoms appear.

DRS. R. H. FITZ and E. P. JOSLIN of Boston, Mass., presented a paper, read by Dr. Joslin, entitled

DIABETES MELLITUS AT THE MASSACHUSETTS GENERAL HOSPITAL FROM 1821–1897; A STUDY OF RECORDS.

They found the total number of cases treated in its medical wards to be 172. The percentage in the last thirteen years has increased four fold over that of the first fifteen. Of these cases 74 per cent. were males, 26 per cent. females; the oldest was 73 years, youngest 5; average 33 years; only one was a negro. The question of hereditary tendency was considered in 42 cases, present in 10 patients, absent in 32. It is an erroneous idea that diabetics pass more liquid than they take. One case lasted twelve years; three suffered only twelve weeks; average duration was one year and a half. Cases of grave diabetes ended fatally in nearly three-fourths of the instances, and a large percentage died comatose. The average mortality of saccharine diabetes has not materially changed in these seventy-four years. Diet restrictions have undergone no marked alterations during this time, and opium is the only drug which has been persistently used throughout the period.

DR. H. A. West, in his Southern hospital, had not seen a case in the negro race. He had noticed its occurrence in very obese persons.

DR. JAS. TYSON of Philadelphia had three negro cases brought to his notice within ten days. It is especially common among Hebrews.

The next paper on

THE INFLUENCE OF SUNLIGHT ON TUBERCULAR SPUTUM IN DENVER; A STUDY AS TO THE CAUSE OF THE GREAT DEGREE OF IMMUNITY AGAINST TUBERCULOSIS ENJOYED BY THOSE LIVING IN HIGH ALTITUDES,

was presented by DRS. MITCHELL and CROUCH of Denver. They discovered, by experiments carefully performed in their bacteriological laboratory, that sputum offers very little virulence after twenty-hours exposure to solar rays. The sputum of consumptives in this altitude has ample opportunity to be blown into the atmosphere before it has been robbed of its virulence. So immunity of our population must be explained on other grounds than non-exposure. The battle for moisture, especially as it occurs in the lungs, we believe to be one of the factors of immunization. The alveoli are too dry to offer a nidus for the bacilli, so the conditions are extremely unfavorable for their development. Also this absence of moisture in the atmosphere acts favorably on the animal organism as a whole, giving increased vitality. Lessened atmospheric pressure is another factor in our immunization. When the organism is subject to increased atmospheric pressure the blood recedes from the skin, capillaries, and mucous membranes producing anemia of these parts. The reverse is true with diminished pressure. Diminished surface pressure also allows the body-heat to be easily and continuously equalized. Appetite is better; metabolism more complete; red blood-cells more abundant; percentage of hemoglobin greater. All of which is favorable to immunization.

DR. JAMES TYSON of Philadelphia presented a paper upon

OPIUM AND IRON IN BRIGHT'S DISEASE.

Contrary to the opinion he once held, much mischief is done by iron in Bright's disease. If the gallons of Basham's mixture had been poured into the gutter instead of the patients' stomachs it would have been a good thing. It is harmful in locking up secretions. It is not indicated and should not be prescribed in cases of acute Bright's disease. It is contraindicated also in chronic interstitial nephritis but is best borne in chronic parenchymatous nephritis, but even here the doses given are needlessly large. When iron barely tinges the stools it is proof that enough has been given; if they are rendered black the iron given is excessive. Death has not infrequently been precipitated by opium in uremic conditions in which opium is positively contraindicated. Under no circumstances in chronic interstitial nephritis should opium be used. It may be used in the uremic convulsions of puerpural fever.

DR. H. A. WEST expressed the belief that iron is beneficial and indicated in many cases of acute Bright's disease. It had been his experience that hypodermic injections of morphia and atropia were the only means possible after other remedies had utterly failed to control convulsions, especially of the puerpural kind.

DR. VAN HORN of Illinois remarked that if the gentlemen would use the lancet they would have no use for opium, morphin, or the bromids.

RARE CASES OF ARRHYTHMIA

was the subject of a paper read by DR. J. M. ANDERS of Philadelphia. He reported a case of tobacco poisoning in which on ausculation four sounds could be distinguished in each cardiac rhythm and both first and second sounds were duplicated, the pulse-wave being synchronous with the second element of the systole. The pulse even showed a modified double beat when moderate pressure was made upon the radial, dependent on double ventricular contraction. Also double reduplication was noted in a female with exophthalmic goiter, this being a case of asynchronous contraction of the two ventricles. The third case was complicated by marked obesity. The pulse was irregular in volume and rhythm, and 96 while patient was at rest. The systole occasionally failed to send a pulse-wave to the radial artery. Valvular affection was not demonstrable, but there was feeble, muffled first sounds, with *pulsus alternans*. On holding the breath the heart-rhythm became at times almost regular.

DR. C. S. BOND of Indiana read a paper, entitled

CONSIDERATION OF FOUR CASES OF EPILEPSY, WITH A REFERENCE TO THE CAUSE.

His first case was that of a child three months of age, of good family history, no injuries. Petit mal and convulsions represented cortical explosions caused by toxic influence of fermentation of food in the alimentary canal. Second case was in a boy of six years, whose father has developed locomotor ataxia, and the mother had uremic convulsions at the child's birth. Strict adherence to limited diet, chiefly of milk, and no bromid, has brought about long intervals between attacks. Third patient was a girl seventeen years of age, who habitually had three or four attacks a day. She was the victim of lowered power of digestion, attended by fermentation in the alimentary canal. A diet limited to a half pint of milk every six hours induced a passive condition for three years. When the diet was extended a relapse occurred. If bromids were given the stomach was disturbed and attacks increased. Fourth patient was a man, twenty-seven years of age, with a good family history, who suffered pain after eating. As a result of a restricted diet and the use of magnesia once a day he went five months without an attack. The author emphasized the fact that with the use of bromid we often ward off attacks in children, but the condition is still present, and becomes chronic.

The Section elected Dr. Frank Billings of Chicago, chairman; Dr. C. E. Edson of Denver, secretary, for the ensuing year.

Adjourned to the following day.

GENERAL SESSION.

THIRD DAY—JUNE 9TH.

The following named gentlemen were elected officers of the Association for the ensuing year.

President, J. M. Matthews, M.D., of Louisville, Ky.; vice-president, W. W. Keen, M.D., of Philadelphia; second vice-president, J. W. Graham, M.D., of Denver, Col.; third vice-president, H. A. West, M.D., of Galveston, Tex.; fourth vice-president, J. B. Minning, M.D., of Kansas; treasurer, H. P. Newman, M.D., of Chicago; librarian, G. W. Webster, M.D., of Chicago.